The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees.

VOL. XXXVI. CHICAGO, ILLINOIS, JUNE 8, 1901. No. 23.

Address.

THE PRESIDENT'S ADDRESS.

DELIVERED AT THE FIFTY-SECOND ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ST. PAUL, MINN., JUNE 4-7, 1901.

BY CHARLES A. L. REED, A.M., M.D.

CINCINNATI, OHIO.

In approaching the discharge of my duties as presiding officer of the fifty-second session of the AMERICAN MEDICAL ASSOCIATION, I beg to express my appreciation of the generous suffrages by which I have been called to a position of such conspicuous honor. This appreciation becomes all the more pronounced when I reflect upon the magnitude and achievements of this great national body and upon the luster of the distinguished men who have presided over its deliberations. This thought brings me to the first duty of the occasion, and that is, officially to bring to your attention the fact that since our last reunion three of my most illustrious predecessors have been called from their worldly activities to the realm of rewards. Alfred Stillé, Lewis A. Sayre and Hunter McGuire, each a former President of the Association, died within a single week. Their lives were known of men, their records are ornaments of our annals, and their achievements are their eulogies. They labored zealously and with beneficent results, not alone in the scientific field, but in behalf of an organized national profession; and to guard zealously the splendid legacy which they, among others, have left us, must be one object of our labors upon this auspicious occasion. The hope is indulged that steps may be taken to procure suitable portraits of these and of other deceased Presidents of the Association, to be placed in some safe gallery until such time as the Association may be able to transfer them to its own Temple of Fame. I recommend that suitable formal action be taken on this occasion relative to the life, distinguished services, and the death of these lamented *confrères*.

FOREIGN RELATIONS OF THE AMERICAN MEDICAL ASSOCIATION.

The AMERICAN MEDICAL ASSOCIATION accredited delegates during the last year to several foreign medical conventions, notably the International Medical Congress at Paris, the Dominion Medical Association of Canada, the Mexican National Association and the Pan-American Medical Congress at Havana. To each of these organizations the AMERICAN MEDICAL ASSOCIATION sustains relations of peculiar intimacy. As one of the great scientific nations of the earth, the United States is naturally an integral part of the International Medical Congress. This Association, by a resolution presented by your present executive officer, took the initiative in 1891, in organizing the Pan-American Medical Congress. The first reunion of that Congress was held in Washington in 1893, under the presidency of the late lamented Dr. William Pepper. The second was held in the City of Mexico in 1896 under the presidency of Dr. Carmona y Valle, while the third has been held during the last few months in the City of Havana under the distinguished presidency of Dr. Juan Santos Fernandez. This movement has for its object the establishment of closer relations between the medical profession of the different countries of the Western Hemisphere. It has already borne excellent fruit in the increased patronage of our medical schools from the far south, in the improved status of American medical practioners in Latin America, in a better understanding of quarantine questions in the different countries, and in the development of a concert in the investigation of the medicinal flora of the Western Hemisphere. Our relations with the medical profession of Canada must be of increasing intimacy, and I indulge the hope that while maintaining the national limitations of our Association for delegate and legislative purposes, its membership, with the privilege of participating in all scientific matters, may be freely opened to our brethren who live beyond our immediate borders.

FISCAL AFFAIRS AND THE JOURNAL.

It has passed into unwritten law, born of the gradually developing features of our organization, that your President shall restrict his annual address to a discussion of the affairs of the Association and to the great object to which, by the terms of its Constitution, it stands consecrated—"the common interests of the medical profession in every part of the United States." In compliance with this rule, and realizing that I am leaving scientific questions to be presented by orators appointed for the purpose, I have pleasure in calling your attention to the satisfactory condition of the affairs of the Association, as indicated by the consolidated report of the Treasurer and of the Board of Trustees. From it you will observe that under the judicious management of your Board of Trustees you had a cash balance at the end of the last fiscal year of $31,004.67, being an excess of $3,696.66 over the preceding year. Your plant has been increased in value to the amount of nearly $10,000.00, and the net profits of THE JOURNAL amounted to nearly $14,000.00. You will be gratified to realize that, in addition, you have safely invested as part of a fund with which to buy a home for THE JOURNAL and for the Association, the respectable sum of $25,000.00. If, however, you have occasion to feel satisfied with the normal condition of your finances, you must contemplate with pride the rapid increase of your Journal, in quality, size, circulation and influence. The average weekly circulation grew, during the last fiscal year, from 13,672 to 17,446, and I have added pleasure in informing you that, since the period covered by the

report, the weekly circulation has grown to 22,000 copies. For the accomplishment of these splendid results, I feel that you will join me in hearty acknowledgment, not only of the sagacious management by the Board of Trustees, but the tireless industry and the discreet direction of our accomplished editor, Dr. George H. Simmons.

I feel that it is important, however, to call your attention to the fact that it would have been impossible for your Board of Trustees to have accomplished these results if, through its action, the Association had not become incorporated. Leases were to be executed, purchases were to be made, contracts were to be entered into, money was to be loaned, and bonds were to be exacted, to do all of which it was necessary that the Association should become a legally organized corporation. This was effected, *ad interim,* by the action of your Board of Trustees, which procured articles of incorporation under the laws of Illinois, bearing date of April 14, 1897. I am not aware that this fact, attested by the document which I have laid before the Executive Committee, has ever been confirmed by the vote of the Association. I recommend, therefore, that such action be taken at the present session.

If, however, the condition of the Association, and particularly of THE JOURNAL, is, on the whole, occasion for much satisfaction, certain facts revealed by the report are food for thought. Thus, THE JOURNAL has an aggregate circulation two and one-half times greater than the aggregate membership of the Association. It would seem, therefore, that while the profession at large prizes THE JOURNAL, it places relatively less than half as much value upon membership in the Association. This fact becomes strikingly significant when it is remembered that membership can be acquired by those who are eligible at no additional expense and with but trifling inconvenience. Does THE JOURNAL fulfill all the wants of the profession arising in connection with the Association? Are there no additional advantages to be derived from membership? Is there a lack of *esprit du corps*—a lack of the sense of unity in the profession? Is the existing basis of our national organization distasteful to the majority of the practitioners? Do our subscribers embrace a considerable number of practitioners who, under existing rules, can not become members, and whose influence, therefore, cannot be secured in behalf of the Association? These are questions that I am at liberty to ask, and that you are at liberty to answer.

Another thought suggested by the report relates to the disposition of the accumulating surplus. Shall the present policy for creating a fund for the purchase of property be carried out? Shall a larger proportion of the money be expended in still further exploiting THE JOURNAL? Shall the members receive a direct advantage from the earnings of the property which they have created, by reducing the annual dues, or shall a certain proportion of our surplus be expended in conducting original scientific investigations on subjects of universal interest to the profession? I cannot resist the temptation in this connection to venture replies to these questions far enough to say that, in my opinion, a reserve should be held in hand large enough to meet any possible contingencies that might occur by fire or other disaster in connection with THE JOURNAL; that the present generous policy in promoting the welfare of THE JOURNAL should be continued; that the dues of the Association should not be decreased; and that the question of establishing and defraying the expenses of certain commissions for special scientific investigators should be taken under serious consideration. The question of tuberculosis is not yet a closed chapter. The causation of cancer is yet a sealed mystery. The problems of tenement-house reform are not yet solved. The prevention of various endemic diseases has not yet been made practicable. The systematic investigation of the American medicinal flora, begun under the auspices of this Association more than forty years ago, remains an uncompleted task. These are a few among the many objects of a specific character which demand and should receive the fostering care of the Association.

I feel however, that at the present moment, and under the existing features of our organization, it would be almost impossible to determine, judiciously, either of these very important questions, and I now bring them before the Association only for the purpose of directing attention to them, with the hope that they may be taken up subsequently and under more auspicious circumstances.

SCIENTIFIC WORK OF THE ASSOCIATION.

The Association began its career with general meetings devoted chiefly to questions of medical education and professional conduct, and to lengthy reports from various standing committees. In 1860 it divided itself into a few sections, each with a certain autonomy, and each devoted to a particular part of our great scientific work. This change was followed by the establishment of the Judicial Council, by which means controversial questions, many of them of a personal character, were eliminated from the general meetings. The subsequent creation of the Executive Committee still further relieved the general meetings of annoying details. Thus relieved, both the general meetings and the sections have grown in scientific importance, emphasizing the persistence of our devotion to what must ever be recognized as the essential, fundamental object of our organization—the cultivation of the medical sciences. It must be acknowledged, however, that great as has been the progress in this particular, too much of the time of our general sessions is yet devoted to the consideration of matters which might, with propriety, be relegated for final action to a smaller body. It would redound largely to the interest of our annual session if the general membership could be entertained and instructed at our general meetings by exercises of a more purely scientific character, of such broad nature that they should not be restricted to any of the sections. A reform in this particular will be a long step in the direction of progress. The sections, in consequence of the faithful labors of their officers, offer strikingly attractive programs for the present session. In several of the lists will be found the names of invited guests who, through fortuitous circumstances, are not members of the Association, but who are, nevertheless, active workers in the scientific field, and whose participation in our labors will enrich the value of our proceedings and enhance the felicities of the occasion. I bespeak for them your cordial welcome. While the officers of sections and your President have exercised the prerogative of inviting guests, who come as guests, and not as members of any class as specified by the Constitution, such invitations have been extended solely with the object of advancing the interests of the Association. I look upon this privilege, which has been exercised by all of my predecessors and by previous officers of sections, as one of extreme importance, and one which should be continued under any plan of reorganization which may be adopted. It is my conviction, however, that the privilege should be hedged about by certain

limitations, one of the most important of which should be that an invitation should not be extended a second time to any person residing within the United States whose professional qualifications may entitle him to membership. With reference to the invitation of persons identified with the allied sciences, the matter should be left absolutely to the discretion of the President of the Association and with the officers of sections.

CONGRESSIONAL AND STATE LEGISLATIVE AFFAIRS.

The AMERICAN MEDICAL ASSOCIATION, during the first fifty years of its existence, exerted relatively little influence upon legislation, either state or national. Since the Standing Committee on National Legislation and the National Legislative Council of delegates from the state societies have been established, and have become coöperative, there is some evidence that the voice of the profession is heeded at Washington. The experience of the splendid committee of the Association, acting in concert with the National Legislative Council during the last year, has, however, shown the serious necessity for more thorough organization in protecting the interests of the profession, and the interests of society as represented through the profession. The inefficiency of our present organization for influence upon Congress was shown in the inability of your committee, notwithstanding its strong *personnel* and the influences at its command, to prevent the degradation of the army medical service. This was accomplished by the passage of a bill under the championship of Senator Hawley, by the terms of which the medical corps of the army is subjected to unfair and humiliating discrimination. This law grades the medical department for rank, promotion, and, in consequence, for pay, below every other department and special corps of the army, and, with the exception of second lieutenants, it is graded below the line. In accordance with its provisions, a medical officer, to obtain a colonelcy, must pass through three times as many files as an officer of either the Quartermaster's, the Subsistence or the Pay departments; more than twice as many as an officer of Engineers or of Ordnance, and nearly twice as many as an officer of the Signal Corps. The effect of this discrimination is not only to lower the rank and pay of medical officers, but must result in lessening the efficiency of the corps by repelling men of spirit and worth.

In every war known to history the deaths from preventable diseases have exceeded those due to battle. At no time has hygienic science been so resoureeful as at present in preventing disease. A law which fails to give to armies, either in peace or in war, the fullest protection by the application of the latest scientific developments at the hands of specially trained medical men is unjust to the soldier, to society, and to the medical profession. In view of these facts, the army reorganization law of the last Congress was inexplicable and inexcusable. It, however, forces itself upon your consideration from another standpoint. Physicians are citizens of the Republic. As such they are intellectually, socially, politically and officially the equals of any other element of the body politic. There is no station to which they may not attain; there is no distinction of which they may not be the recipients. Their rights are of manhood origin and their perogatives are inherent. They are, in very fact, peers of the realm, and the peers of any peers of any realm. When the status of any number of physicians in their representative relationship to society is lowered, the status of the medical profession in general is menaced in corresponding degree. When the Congress, by the enactment of a law, degrades, relatively, the status of an important body of medical men, engaged in the public service, it strikes at the status of every physician in the country. It becomes, therefore, the duty of every member of the medical profession, jealous of his rights, his prerogatives, and the fair name he may leave his children, to resent as personal between himself and every member of the Congress who voted for this law, the action which cast a stigma upon our profession.

It has been the conviction of many enlightened members of the medical profession that the means employed by the general government for the protection and promotion of the public health are capable of improvement. These duties have devolved upon the Marine-Hospital Service, which was originally designed to give succor to unfortunate people, without other domicile, who were employed upon our rivers, lakes, and the high seas. With the growth of sanitary science this service, being the only established agency available by the government for this purpose, has been largely diverted from its original object. As a result, under the present wise administration of its Surgeon-General, its representatives are abroad investigating the sanitary condition of foreign cities, its agents are at our ports beating back threatened epidemics, while valuable investigations are being conducted in its laboratories. In the exercise of its quarantine functions, however, it comes in conflict with the police power that is guaranteed by the Constitution to the different states. The friction thus engendered has been especially marked in the seaboard states. While this is true, the Marine-Hospital Service, in scope and design, does not fulfill in highest degree the objects of a central coördinating agency for the protection of the public health. It was thought to create a Department of Public Health, with its executive officer in the cabinet, but this idea yielded to that of a bureau in charge of a large Advisory Council, composed of representatives from the various states. Resolutions have been adopted and memorials have been sent to the Congress, committees have been appointed, money has been appropriated by this Association; bills have been introduced, and hearings have been had in committee, with the result that the conditions to-day are precisely the same that they were ten years ago, when the agitation was inaugurated in the session of this Association held at Washington.

Secretary Wilson, of the Department of Agriculture, in his report for 1899, recommended that the Congress appropriate money to defray the expense of a systematic investigation of the medicinal flora of the United States, and of experiments upon the naturalization of medicinal plants indigenous to other countries. This recommendation was based upon the fact that the United States is the only great country which either has not conducted or is not conducting such experiments, and upon the fact that the proposed measure, touching the avenues of industry, manufacture, commerce and the public health, was one of national concern. This measure, however, with its manifest importance, was denied even courteous consideration, while its friends were denied a hearing by the committees of the Congress.

The cause of failure on the part of this Association to procure legislation by the Congress—and with the exception of preventing the passage of the Antivivisection bill last year and securing the enactment of the Quarantine bill this year, our recent efforts must be recognized as failures—I say the causes of our failure

are properly subjects for careful consideration. I have examined the records of the Association from the date of its organization, and have been profoundly impressed with the fact that memorials, resolutions, or even more definite propositions addressed to the Congress have, for the most part, represented the views, or rather the impressions, of the individual members proposing them. They have generally been presented in the general meeting, and have been endorsed without the deliberation essential for wise action; but a deliberation which is simply impossible in the limited time available in our general meetings. In certain instances memorials to the Congress have been presented at one session of the Association, have been reported to committees and reported back for action, either at a later meeting of the same session or at the succeeding annual session of the Association. But it becomes evident that this course lessens the evil but a trifle, for the reason that the committees to which such matters were referred have been constituted either under the leadership of the member proposing the measure or of members of a standing committee who had no interest in or understanding of the proposed measure. Such memorials, resolutions or propositions, when acted upon affirmatively by the general meeting of the Association, have, possibly, been mailed to some member of Congress or of a Legislature, but were not followed by effective work in the rank and file of the profession or among their patrons. When such bills have been presented to the Congress, and have received a certain amount of support from representatives of this Association, they have, as a rule, attained only that degree of importance that have made them valuable to their ostensible champions, as something to trade in the game and barter of legislation for something which would please a larger number of constituents and command a larger number of votes. In view of the fact that, after all, the argument of votes is the only one which appeals effectively to the average Congressman, it behooves this Association, in its efforts to conserve the interests of the profession and of society, to put itself in position to influence the largest number of votes. Every physician, therefore, should, in a perfectly respectable sense, become an active working politician. This subject, however, is of such breadth and of such depth that it may be well for us to pause at this juncture long enough to consider, from the standpoint of fundamental facts, the relationship of physicians to each other, and of the medical profession in the aggregate as an integral factor in society.

THE PROFESSION, THE ASSOCIATION AND THE COMMONWEALTH.

In approaching a study, however brief, of the relation of the medical profession to the state, or, as I prefer to call it, the commonwealth, I feel that I am inviting your attention to an eminently practical theme; one which may enable us to understand the influences by which we have arrived at our present estate, and the means by which we may advance to even greater achievements. As we approach this theme—this eminently practical theme—we discover that the status of the medical profession, like that of every other element of that complex whole which we call society, is a perfectly natural one. Whatever it may be, it has been attained in the process of evolution, and has been, and is determined, by laws as immutable as those which govern the commingling of atoms or the sidereal strides of the planets. It is not the result of conventions or of resolutions or of statutory enactments; but these are to be interpreted rather as *indiciæ*, for the time being, of the position of the profession in the body politic. They are, indeed, consequences rather than causes, and as such they are subjects for careful inquiry. It is by a study of them that we are enabled in part to determine those laws, those natural laws, our harmony with which is essential, not alone for the present usefulness and continued progress of the profession but for the ability of the medical profession to conserve the welfare and promote the happiness of society at large.

But I have said that the position of the medical profession is a natural one. The truth of this declaration is apparent when we go back to the beginnings of society—when we examine the evidences presented by primitive peoples. We are familiar with the classic example so frequently utilized as a starting point in the discussion of sociologic phenomena—the example of the two aborigines, one of whom makes better arrows, and the other better mats than his companion, when, presently, one confines himself to arrows, the other to mats, each trading his own for the other's product. Here is an example of the beginning of what the scientists call "specialization of function in the social organism." It is an interesting process, which, based upon varying necessities and diverse aptitudes, results in multiplication of handicraft until somebody is hurt. This is a new necessity, and it is met by a new aptitude, and the possessor of that aptitude—the medicine man, our honored progenitor—steps upon the scene. His companions, appreciating his services, reward him with their arrows and mats; and he, finding the life to his liking, restricts himself to his new-found vocation—and the medical profession is established! As the necessity for his services, whether of charm or incantation, becomes more apparent, the esteem of his fellows becomes more pronounced. As events progress he is accorded certain rights, given certain prerogatives and hedged about by certain limitations, all calculated to increase his efficiency in promoting the common welfare—and thus is the practice of medicine regulated. He is spared from the battle that he may serve his companions, and he stays away from the chase that he may delve into the great mysteries—and thus is medical education inaugurated. He is the exponent, not only of his professional knowledge, but of at least the average intelligence of his people. He is, in short, an integral part of the primitive social fabric. As such, he shares the manners, the customs, the aims, the ambitions of his companions; and he, with them, is controlled by the forces which determine the common state and the common destiny. His status is, therefore, determined by the very laws which control the growth and development of society itself. So true is this that, from the dawn of history until the present day, and in every stage of sociologic development, the civilization of a people may be infallibly determined by the intelligence, the efficiency and the influence of its medical profession.

THE MEDICAL PROFESSION AND SOCIETY FIFTY YEARS AGO.

It would not be to our present purpose to follow the evolution of society as exemplified in any of the civilized people, or, as the scientists say, "distinct ethnic entities of the world," in which the present complexity has been attained by an orderly succession of events. And it would be equally unnecessary to show, what everybody knows, that the medical profession, the heritor, in common with others, of antecedent influences, has been propelled by the same forces and by equally orderly events to precisely the same standard of civilization. The les-

son before us is that of the relation of the medical profession to a society, which, but a few decades ago, was the most diverse in origin and the most heterogeneous in constitution known to modern history; but a society which at the dawn of the twentieth century is one of the largest, richest and most intelligent of the world, a society well amalgamated, and which by common consent of even adverse critics is moving in harmony with the most advanced influences of civilization. I fancy I should suddenly find myself unpopular with the audience if I were to intimate that you, who comprise it—that you, the representatives of the medical profession—have failed to contribute your full quota to the great progress which that society in general has achieved, or that you do not reflect in intelligence and morality the highest type of civilized man. I hasten to allay your apprehension, for I have no such intention. On the contrary I ask you to indulge with me in a retrospect of American society during the last half dozen decades that we may the better understand the important part that you, and the profession that you represent, have played in the attainment of present results.

As I have already stated, the middle of the nineteenth century found diverse conditions of society in the United States. The older cities of the seaboard were the centers of an advanced civilization. The remoter counties of the same state, however, were then, in the absence of railroads, the telegraph and modern mail facilities, more remote from the centers of American influence than is St. Paul to-day from St. Petersburg. The great tide of emigration that had already poured and was yet pouring over the mountains and spreading in lonely habitations or widely separated communities over the vast valley of the Mississippi from the lakes to the gulf was busily engaged with the serious problem of existence. The forest was to be felled and the prairie was to be subjugated, habitations were to be built and crops were to be raised. In the midst of these exactions, institutions of higher learning were established, and to an extent patronized, and some strong men were produced. But it must be recognized as true that society in general had but little time and less money to devote either to schooling or to the amenities of life. The medical profession, under these circumstances, was precisely like the community of which it was a part. There were but few medical colleges, and they, for the most part, were but meagerly equipped. Many doctors became such while going from one town to another. Ignorant inventors of alleged systems of cure hawked their wares in the highways and the byways. Dogmatism that was destructive to intelligence was rampant, while schism was fostered by the baneful commercialism that too generally pervaded the heterogenous mass of forty thousand people that comprised the medical profession. In eight of the twenty-six then existing states no laws affecting medical practice had ever been enacted; in eleven, laws previously enacted had been repealed; in three only were there any restrictive laws, and these proved inefficient; while the facts could not be ascertained relative to the remaining four states.

THE ERA OF ATTEMPTED VOLUNTARY REGULATION OF MEDICAL PRACTICE.

To remedy these evils, and actuated by the love of science, the promptings of self-interest, and by devotion to the interests of humanity, representatives of the various state medical societies met in convention over half a century ago and organized the AMERICAN MEDICAL ASSOCIATION, with the avowed object of having its members represent and take cognizance of "the common interest of the medical profession in every part of the United States." It sought to cultivate medical knowledge among its members, to elevate the standard of medical education, to promote the honor and influence and interests of the medical profession, and to enlighten the public concerning the relation between the medical profession and society. Emulation and concert of action in the profession and friendly intercourse among those engaged in it were additional aims of the founders of this great body of representative American medical practitioners. A constitution, by-laws and certain rules of conduct were adopted. The Constitution provided for a delegate body, delegates being accredited from recognized medical societies, medical schools and eleemosynary institutions. The rules of conduct prescribed in detail the deportment of a physician, the deportment of the patient, interdicted the licensure of sectarian physicians, and proscribed from consultation those whose practice was based upon an exclusive dogma. The influence of the new Association was extended chiefly through the avenues of the various state societies, many of which adopted the rules of conduct that had been prescribed by the newly formed national body as the basis of affiliation. Several of the state societies, notably those of Massachusetts, Rhode Island and Mississippi, finding either that the prescribed rules of conduct were not suitable to their respective local conditions, or feeling that they were sufficiently in touch with the ordinary forces of civilization to require no such formulæ, never adopted the rules of conduct prescribed by the national body. The medical association of Alabama adopted the rules with rather a *naive* proviso that somebody be appointed to call attention to such of the special teachings of these rules "as may seem to require elucidation in view of special circumstances and conditions." Other state societies adopted more or less modifying resolutions, but the general spirit of ostracism and aloofness was maintained during the succeeding three decades. The result of this movement was immediately salutary; it developed an *esprit du corps* in the great body of the profession; it gave an authoritative definition to medical education, and it created a strong and influential national body within the profession. At the same time, however, it became apparent that the organization did not possess the necessary inherent strength to accomplish its avowed object to regulate the practice of medicine. As time passed schismatic medicine grew apace, its colleges multiplied, its practitioners appeared all over the country, exemplifying that law that always makes the blood of the martyrs the seed of the church. Quackery of the most flagrant character was found everywhere, and society was unprotected from its ravages, while the inability of a voluntary unchartered organization to enact and to execute plenary laws was reduced to a demonstration. The medical profession, as an organized body, discovered that its relation to the commonwealth was, as the result of its own proscriptive policy, scarcely more intimate or more influential than at the beginning of the thirty years' hopeless experiment.

THE ERA OF EFFECTIVE LEGISLATIVE CONTROL OF MEDICAL PRACTICE.

The era of effective legislative control of medical practice came as the natural reaction from the demonstrated failure to accomplish the same result through voluntary organization; but it came as the result of the sentiment which had been propagated largely through the influence

of this Association. The representatives of progressive medicine, turning from the National Association invoked the aid of their respective state societies in taking up the question with their respective legislatures. The profession in each state, however, recognizing its own local conditions, proceeded in its own way to attend to its own business. The very earliest attempts to secure state legislation revealed the fact that the so-called irregular practitioners, under the stimulus of ostracism and the fostering care of public sympathy thereby induced, had become so numerous and so influential that in the majority of states nothing could be done without their coöperation. It was no longer a theory, but a condition with which the real reformers were confronted—and they met it. California, in 1876, through its regular medical society, took the initiative. After conferences with the representatives of the sectarian societies, and after securing their coöperation, a law was procured creating a licensing board composed of representatives of both the regular and sectarian schools of practice. Illinois, confronted by precisely the same condition, took precisely the same course. Alabama, always progressive, but the happy possessor of other conditions, was able to place the regulation of medical practice for the time being under the control of its incomparable state medical association. Colorado created a mixed board. New York, confronted by conditions even more complicated than those in other states, took up the same task. The profession of that state, acting through its organized body, containing among its members many of the most honored and illustrious names in American medicine, found it doubly necessary to enter into treaty with the denominational physicians. It realized, however, that the rules of conduct to which it had always conformed contained, among other provisions, one which made it unlawful to "* * * examine or sign diplomas or certificates of proficiency for, or otherwise be especially concerned with the graduation of, persons whom they have good reason to believe intend to support and practice any exclusive and irregular system of medicine."

As the thing expressly interdicted by this rule was the very thing which it was proposed to do, and which had been done in other states, and which it was very necessary to do in New York, the medical society of that state amended the rules of conduct so that it or its members might, at discretion, enter into professional relations with any or all persons whom the law of the state at that time recognized to be practitioners of medicine. When this action was brought to the attention of this national body it resulted, not as might have been expected, in the amendment or the abrogation of the rule which had grown obsolete in the march of events, but in its tacit reaffirmation and in the opprobrious excommunication, for the time being, of the entire profession of the great Empire State. This action, viewed impartially after the lapse of nearly twenty years, becomes the more extraordinary when it is observed that similar action was never taken with regard to Massachusetts or Rhode Island or Mississippi, the societies of neither of which had ever adopted the prescribed rules of conduct; nor with regard to California or Illinois or Colorado, each of which had, by overt act, if not by open declaration, so far as this rule is concerned, taken an equally non-conformist position. It is not surprising that, with such an example before the state societies, the experiment in consistency has not been repeated. But the movement of effective regulative legislation, once inaugurated, happily spread with great rapidity. Mixed boards of licensure are now to be found in the majority of the states of the Union, and in the majority of such boards are to be found members of the AMERICAN MEDICAL ASSOCIATION engaged in issuing licenses to practitioners of exclusive dogmas, and sitting in consultation with sectarian physicians, not over a dose of medicine, but over the vastly more vital question of the qualifications of those who are to care for the sick of our Republic.

THE MEDICAL PROFESSION AND SOCIETY AT THE BEGINNING OF THE TWENTIETH CENTURY.

The results of the twenty-five years of statutory regulation of medical practice are in striking contrast with the results of the quarter of a century of attempted regulations by methods of proscription. At the conclusion of that humiliating experiment, as at the beginning of it, there was not a single effective medical practice law on the statute books of a single state of the Union. To-day there are forty-eight state or territorial licensing boards, the most of them being composed of representatives of both the regular and the sectarian schools of practice. The laws of the different states are of varying efficiency, the one procured by the Medical Society of the State of New York, at the price of yet-maintained excommunication from this body, standing to-day as the model of excellence for the entire country. Under the influence of these laws, instigated by members of the AMERICAN MEDICAL ASSOCIATION, and which, after all, are but expressions of the sentiments of the medical profession confirmed by society at large, many substantial reforms have been accomplished. The medical schools which, in this country, have labored bravely and efficiently under adverse conditions, have been stimulated to increased efficiency. One of the first changes accomplished was the practical standardization of requirements to enter practice; and one of the first features of this standardization was to secure for the student "the aids actually furnished by anatomy, physiology, pathology and organic chemistry"—the four cardinal studies which, strange-sounding as it seems, it was necessary solemnly and specifically to insist upon a half century ago. It follows, therefore, that with broadened and increasingly uniform curricula, it can not be said that schools even of sectarian antecedents entirely "reject the accumulated experience of the profession," nor can it be said that, in a sectarian sense, they any longer possess an excuse for existence. Their graduates, or such of them as do not base practice on an exclusive dogma, are, in many instances, met in formal consultation by even conservative regular physicians, and, in more than one instance, are made members of medical societies that are in affiliation with the AMERICAN MEDICAL ASSOCIATION.

The Illinois State Medical Society, which has always been among the foremost in reform movements within the profession, at its recent annual session, unanimously

"*Resolved*, That the school of graduation shall be no bar to membership in the Illinois State Medical Society, providing such physician is recognized by the local societies as qualified and not claiming to practice any exclusive system of medicine."

The Ohio State Medical Society, by precedent, if not by formal action, established the same rule.

We thus see that the proscriptive rule which, during the more than twenty-five years of its dominance, propagated the very evils it was intended to correct, it rapidly expiring by limitation in the face of new conditions that have been induced, in spite of it, by beneficent and cath-

olic legislation. In the State of New York alone the annual registration of sectarian physicians has diminished nearly 90 per cent. under the operation of its present laws. In the State of Ohio many physicians who are graduates of sectarian schools are making application to have their classification on the register changed to "regular," while equal reactionary movements are observable in other states. Thus we observe the passing of Homeopathy and Electicism just as did the calm scientists of Rome witness the passing of the "Humoralism," the "Methodism," the "Electicism," and the "Pneumatic School" of that period; and just as passed the "Chemicalism," the "Iatro-Physical School," the "Iatro-Chemical School," and the "Brunonianism" and the dozen other "isms" of later epochs, each leaving its little modicum of truth as the memento of its existence. And let us felicitate ourselves that, with the passing of the particular sectarianism of the last century, there is also the passing of its concomitant evils, such as existed in even greater degree in the time of Galen, who "found the medical profession of his time split up into a number of sects, medical science confounded under a multitude of dogmatic systems," and, as if relating the effect of the cause, the historian continues, "the social status and the moral integrity of the physician degraded." The further results of this new order of things, however, are observable, not alone in the modified curricula of the medical schools, but in the changed organic relations of the institutions themselves. Under the pressure of legal requirements the weight falls with almost fatal force upon the small, private and poorly equipped institutions. These institutions, in the interest of self-preservation, and to protect a respectable alumni, are forced either to expand their enterprises or to seek relations with universities which are deeply founded in the community; or else actually to go out of existence. The majority of the schools seek connection with the universities, by which step alone they become logical objects for endowment, and it is to be hoped that this movement will continue until in this great country medical education shall be as firmly established as it is to-day in any of the transatlantic nations.

Another of the new conditions which has developed within the last quarter of a century, as the result of an increasing professional unity, is the efficient sanitary regulations, national, state and municipal, that now afford protection to the people from diseases that were formerly devastating in their effects. It is not necessary in this audience to mention smallpox, cholera, typhoid fever, diphtheria, anthrax, leprosy and the bubonic plague, each of which has been brought under relatively effective control, but I do feel that it is necessary to emphasize the fact that there are many unsolved problems relating to the prevention of disease that stand as a challenge to the industry, the ingenuity and the courage of the profession. While these various changes have taken place, others of almost equal importance are observable in the relations of physicians to society. While the community, instigated by the medical profession, has given to that profession a legal status, definite and increasingly influential, and has given it certain prerogatives and certain exemptions, it has, likewise, hedged it about with certain limitations and imposed upon it certain liabilities. There are numerous laws, both common and statutory—*lex non scripta* and *lex scripta*—that admonish the physician that his conduct carries with it a liability not defined by self-imposed rules, and the numerous courts of our land proclaim that there are tribunals "other than his own conscience to adjudge penalties for carelessness or neglect" on the part of the physician. So numerous, so unjust, and so disastrous are actions before such tribunals that they have caused the development of a new, legitimate and beneficent enterprise, in the development of a company to insure physicians against malpractice. It may be true that in certain states and localities these laws are unjust, and that there is a grave error in their administration by judges created under our wretched elective system; but if so, the facts only emphasize anew the necessity for more complete organization of the profession and for the more active exertion of its influence upon elections.

THE REORGANIZATION OF THE ASSOCIATION.

This brings us again to a realization of the fact that the results that can be achieved only by the unification of our national profession can not be attained under the present organization of our Association. The disproportionately rapid growth of THE JOURNAL as compared with that of the Association can have no other significance. The weakness of the Committee on Legislation at Washington was a question neither of personnel or of industry, but arose purely from the fact that there was no efficient organization in the rank and file of the profession by which speedy and effective influence could be brought to bear upon members and senators. Equal difficulty has been encountered in several states where organization has been similarly defective. The demand for more effective organization of the Association has come from all over the country and resulted in the adoption of a motion at Atlantic City authorizing the appointment of a committee of three to report a plan of reorganization at this session. Another motion was adopted authorizing the creation of a supplementary committee of one from each state and territory, entitled a Committee on Organization, which has been filled by appointing for the most part the retiring presidents of state societies for the current year. The Committee on Reorganization, consisting of Dr. J. N. McCormack, of Kentucky; Dr. George H. Simmons, of Illinois, and Dr. P. Maxwell Foshay, of Ohio, has given to the important question entrusted to it a most careful and painstaking consideration. It has laid before you the results of its deliberation. In doing so it has emphasized the principle that this Association has its origin in the organized profession of the respective states. It emphasizes the fact that the delegate body should be so small that it can remain in prolonged session and give to various subjects under consideration that deliberate attention which has not been possible under the existing scheme of organization during the last forty years. It recognizes the paramount importance of the scientific feature of our work by relieving the general meetings and the sections alike of the troublesome details that now consume the limited and valuable time of the Sessions. It remedies the glaring and serious defects in the present constitution. It prepares the Association, by perfecting the organization, to meet important and pressing questions. These considerations, together with the fact that the existing constitutional provision relative to delay of action on pending amendments has been met by the appointment, a year ago, of a committee for the avowed and published purpose of reorganization, and by the action of the committee in laying the results of its work before every member of the Association—I say these considerations, and these facts, prompt me to advise the adoption of the proposed Constitution and By-Laws in their entirety at the present annual session of the Association.

The Committee on Reorganization, under the restrictions of the resolution creating it, has, very properly, left undisturbed the existing rules of conduct. These, if construed to have a fundamental importance, and if rigorously enforced as they now stand, would disintegrate the Association in a single day. This reason, and others already given, confirm me in the conviction that such rules should be either amended or abrogated, or, if reaffirmed, it should be by general resolution endorsing their underlying principles but disclaiming the present applicability of their details. There are, however, various views entertained upon this subject, and that the matter may be approached in a spirit of tolerance, that it may be discussed coolly and impartially, that a consensus may be reached, and that harmony may be attained, I recommend that the general questions of the revision of the rules of conduct be referred to a special committee on ethics, consisting of three members, with instructions to report to the legislative body at the next annual session of the Association.

THE NEW SCHOOL OF MEDICINE.

The changes which I have advocated are essential for the attainment of the purposes of the Association and for the fulfillment of the high destiny of our National profession. They are demanded by the changes that have taken place during the last fifty years. The legislative functions have passed from voluntary organizations to the Congress and the legislatures, where they belong; but it still devolves upon the profession in the organized capacity, to stimulate, to restrain, or otherwise to control the law-making power. The responsibility of the profession is increased, rather than diminished. Science has come to have a clearer meaning. He who now proclaims a dogma cries alone in the night, while the world sleeps. They who demand a creed may read its varying terms only in the progressive revelation of natural laws. Practice has changed. The depletions, the gross medications, the absurd attenuations, the ridiculous antimineralism have given way to a refined pharmacy and to a more rational therapy. Sacrificial surgery has yielded to the spirit of conservatism. Prevention is given precedence over cure. Education implies research and discovery, and all may delve. I proclaim, events proclaim, the existence of a new school of medicine. It is as distinct from the schools of fifty years ago as is the Christian dispensation from its Pagan antecedents. It is the product of convergent influences, of diverse antecedent origin. It acknowledges no distinctive title, it heralds no shibboleth. It is a school of human tolerance, of personal independence, of scientific honesty. It is the slave of neither prejudice nor preconception, and abandons the accepted truth of yesterday, if it only be the demonstrated error of to-day. It places no premium upon personal prerogative, and extends no recognition to individual authority. It makes no proclamation of completeness, no pretention to sufficiency. It recognizes that truth is undergoing progressive revelation, not ending to-day, but continuing through the ages. It yields its plaudits to achievement, and recognizes that he is the greatest among men who reveals the most of truth unto men. It greets as a friend him who thinks, though he think error, for, thinking, he may think truth and thereby add to the common fund. It heeds all things, examines all things, judges all things.

To you, the exponents of this new school, of this new generation, of this new century; to you, representatives of the Democracy of Science; to you citizens of the Republic of Letters, I extend greetings; and here, in our parliament assembled, here, where our will is supreme, I this day invoke upon our deliberations the spirit of liberty, the spirit of courage, the spirit of progress, the spirit of truth.

Orations.

INTERNAL MEDICINE IN THE NINETEENTH CENTURY.

ANNUAL ORATION IN MEDICINE, DELIVERED AT THE FIFTY-SECOND ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ST. PAUL, MINN., JUNE 4-7, 1901.

N. S. DAVIS, JR., M.D.
CHICAGO.

It is one of the duties of those who address you, as I do to-day, to review what has been newly discovered in the field of medicine or in some limited department of it. At this first meeting of the AMERICAN MEDICAL ASSOCIATION in the twentieth century, it seems most natural to review what has been accomplished in the last one hundred years. The time at my disposal is too brief to read to you a complete history of the achievements of this wonderful epoch, for more of genuine advancement has been made in medicine during it than during all the preceding centuries together. It is only possible for me to point out some of the reasons for the rapid development of medicine, to recall to your minds some of the most important discoveries and applications of them.

A century is not so long a time as we are apt to think. Our grandfathers were vigorous men, in the prime of life, when the nineteenth century was born. Yet changes so great that they seem miraculous have occurred since then. In 1800 this great country was a wilderness, unknown even to the inhabitants of the few straggling settlements upon the Atlantic coast. Our land contained no great cities. There was little travel from place to place. There were no steamboats nor railways; no telegraphs nor telephones. Information traveled slowly by packet ship, canal boat, and stage coach. The discovery of the wonderful properties of the *x*-ray could not then have been flashed over the world in a day and its genuiness and utility confirmed within a few weeks by experiments made simultaneously in all parts of the world, as did happen at the close of the century. To-day all civilized peoples are so united that knowledge has become the common property of them all. In former epochs geniuses delved alone, inspired only by their own enthusiasm. Often, it was many years before their discoveries became widely known or appreciated; and many more before another genius standing upon land already found ventured upon its exploration.

All this has been changed. Learning is not possessed by a few but by many. In earlier epochs men of genius towered above their contemporaries in learning. To-day thousands crowd about their shoulders, so much higher is the average of learning. All scientific workers are now linked together by the rapid dissemination of news, so that no matter in what part of the world they may be, they are kept conversant with what is being thought and done in every other part and they are thereby inspired to greater mental efforts.

Knowledge is no longer isolated. It is cultivated in centers too numerous to count. Even in this new land

universities with great libraries, finely-equipped laboratories, and corps of brilliant teachers and seekers after new knowledge, are found in every part of it. Medical societies have been organized in every state and city, and in many counties and towns. But at the beginning of the century there were only four medical schools in this country, and four state societies, organized for the advancement of medical knowledge.[1]

These changes have been effected chiefly by the rapidity of communication which has been established in all civilized lands and by the greater concentration of the people in large cities.

But it is not in the United States only that the population has increased and concentrated. In 1801 the total population of England and Wales was less than 9,000,000. Of this number more than half lived in the country. At the end of the nineteenth century the population of the same countries was more than 29,000,000, and only one-fifth of this number lived in rural districts. These figures attract our attention to the social changes which have occurred in all civilized lands—changes which have effected not only a greater diffusion of knowledge but have also modified the conditions which produce and limit disease.

DIAGNOSIS.

At the opening of the nineteenth century, "Cullen's Practice of Physic," written late in the preceding century, was the standard text-book. A glance at its contents will give us the clearest conception of the state of medical knowledge at that time. In an edition of this work printed in New York City in 1806 I find no description of structural diseases of the heart; even as a complication of rheumatism heart disease is not mentioned. A single page is devoted to nephritis, but in its description there is no mention of the chemic and microscopic changes in the urine upon which we depend to recognize it and to distinguish its forms. The affections of the respiratory organs were described with similar crudeness, under such chapter headings as "Of Catarrh," "Asthma," "Pneumonic Inflammation," "Peripneumonia Notha," and "Phthisis Pulmonalis," but the catarrhal inflammations of the nose, pharynx, trachea and bronchi were not differentiated from one another, nor were catarrhal and croupous pneumonia, brown induration, hypostatic congestion and edema of the lungs described.

The speculative explanation of diseases and their causes which prevailed at that time is well illustrated by the conclusion reached by Noah Webster, who in his "History of Epidemics and Pestilential Diseases," writes that typhus and nervous fever are due to "conversion of the perspirable fluids of the body into septic matter."

Nothing will help so much to make clear the progress made in medicine in the last century as to compare the resources at the disposal of physicians of our day with those commanded by our grandparents. At the opening of the nineteenth century medical men knew nothing of the clinical thermometer, of percussion, auscultation, uranalysis, clinical microscopy, laryngoscopy ophthalmoscopy, of the sphygmograph, or Roentgen rays.

It was not until the year 1808 that Corvisart spread widely a knowledge of percussion as a means of discovering the physical status of the viscera, although the work of Avenbrugger which he translated and which was the original description of percussion, had been published nearly fifty years before. The work of Avenbrugger and Corvisart was supplemented in 1819, when Laennec published the result of his labor with the stethoscope which he invented four years earlier. From this time dates our clinical knowledge of diseases of the lungs and heart.

In 1827 Bright pointed out the relationship of albuminuria, dropsy and diseases of the kidneys. At this point clinical chemistry may be said to begin.

At the beginning of the nineteenth century, compound microscopes were almost useless, for the images which their lenses made were so distorted and colored that they could not be properly interpreted. In 1812 Dr. William Hyde Wolleston combined two plano-convex lenses so as to correct the spherical aberration which a single double-convex lens produces; and nearly twenty years later Joseph Jackson Lister discovered the utility of combining lenses of crown and flint glass in order to produce an image in the microscope relatively free from distortions and fringes of color. The more recent invention of the oil immersion lens has made bacteriology possible and has solved many of the problems of infectious diseases which puzzled even our fathers in the fifties and sixties.

The dependence of medicine upon ancillary sciences is well illustrated by the sudden birth and rapid development of new branches of medical knowledge which are dependent on the perfection of the microscope.

This instrument has made histology, embryology, modern pathology and bacteriology a possibility. These departments of science are altogether products of the last century.

It was at the beginning of the century that Bichot divided the structures of the body into what he called "tissues" and showed that there were only a few of them. It is surprising that the great anatomists before him did not make the same discovery.

PHYSIOLOGY.

As modern anatomy has been dependent upon the microscope in order to explain structure, so physiology has been dependent upon experiments on living animals to explain function. It is true that in earlier epochs at considerable intervals of time experiments upon living animals were made, notably by Harvey, when he studied the circulation of the blood, but they were never made systematically until the discovery of anesthesia in the nineteenth century made them painless. No wonder, therefore, that the explanations made by physiologists in 1800 seem to us extremely crude. Haller, for instance, whose printed lectures formed the text-book of most students at that time thus describes the nature of blood: "Hydrostatical experiments demonstrate in the blood first a kind of volatile vapor or exhalation which immediately and continually flies off from the warm juice with a sort of fetid odor coming betwixt that of sweat and urin. This vapor, being catched and condensed in proper vessels appears of a watery nature joined with a small tincture of an alcaline disposition."

A few pages further on what he says of the blood gives us an idea both of the state of physiologic and pathologic knowledge at that time: "For the blood in a sound healthy state, not injured by putrefaction or too violent a degree of heat, is neither alcaline nor acid, but mild and gelatinous and a little saltish to the taste; yet in some diseases it is sharp enough and comes near to a state of putrefaction, as for instance in the scurvy, when it corrodes through its containing vessels and in

1. The colleges were medical departments of Pennsylvania, Columbia, Harvard and Dartmouth (founded 1797). The societies were New Jersey (1766), Massachusetts (1781), Connecticut and New Hampshire (1791).

those who have ascites or dropsy whose waters are often much of an alcaline and corroding nature."

At the close of the eighteenth century the part which gland cells play in forming secretions was not comprehended. It was believed that "the albuminous or hardening juices are separated almost everywhere from the arteries themselves, into continuous excretory canals, without any intermediate organ or machine betwixt them." It was believed that all excretions existed primarily in the blood.

The physiologists of this period appreciated the importance of the lungs and the act of respiration, but their exact use they did not comprehend. Haller enumerates several possible functions which they might perform, yet he did not feel sure that any one of them was the real one. For instance, he says: "Our blood acquires its heat principally in the lungs, for that all animals which have lungs and two ventricles in the heart have the heat of their blood commonly twice that of the atmosphere. But does not this arise from the alternate extension and contraction, relaxation and compression of the pulmonary vessels by which the solid parts of the blood are perpetually rubbed together and closely compressed in the attrition that is made during expiration, as it is more rapidly moved and ground together during inspiration."

Our forefathers one hundred years ago often endeavored to hide their ignorance in long names and resounding phrases, a common practice, indeed, in all times and not wanting to-day, for how much ignorance will our successors find hidden in words now so commonly used as are metabolism and autointoxication.

PATHOLOGY.

Pathology as a distinct department of scientific medicine originated in the nineteenth century. It was not until 1860 that Rudolf Virchow demonstrated conclusively his famous dictum: *"Omnis cellula e cellula."* His studies of cells in disease laid the foundation and did much to rear the superstructure of cellular pathology. So rapidly has a knowledge of this subject grown that we can unhesitatingly say that we now possess very accurate and detailed information as to the anatomical changes which disease effects. The insight of physicians was so greatly extended into the nature of morbid processes by these pathologic studies that enthusiastic devotees of them felt that the application of the microscope to the study of disease would dispel its mysteries. Increasing information, however, soon demonstrated the limitations which exist as to knowledge derivable from a study of morbid anatomy. Most of us remember how, soon after the birth of bacteriology, it was also hoped that from it at last we would learn the true essence of disease. But we know now that in most ailments after the bacteriologist has discovered the offending micro-organism the chemist must help us, for it is usually a product of the growth of the organism, not its physical presence in the tissues that causes disease.

The production of disease by parasites imbedded in the tissues of the human body was suspected from early times, but was not demonstrated until the end of the first third of the nineteenth century, when James Paget, then a medical student, found unusual nodules in the muscles of a man whom he was dissecting. These Richard Owen demonstrated to be the cocoon of a minute animal which he called trichina spiralis. In 1847 Dr. Joseph Leidy of Philadelphia found them also in pork, and soon thereafter it was shown in Germany that men could become infected by eating pork containing trichina, and that in consequence there developed in them a definite train of symptoms.

In 1837 Latour in France and Schwann in Germany, almost simultaneously propounded the view that fermentation and putrefaction are due to the growth of micro-organisms. Liebig, with all the weight of his authority, antagonized this belief in a "vitalistic" explanation of these phenomena. Pasteur undertook to settle the dispute by methods of research, which proved to be the foundation of a new department of science—bacteriology. The results of his experiments were published between 1857 and 1869. He proved that without micro-organisms there could be no fermentation, no putrefaction or decay. These studies prompted many investigators to attempt to demonstrate the suspected relationship of micro-organisms to disease. In 1863 Devaine succeeded in showing that the organisms, seen by him in 1850 in the blood of animals which had died of anthrax, were its cause. This, as some of those before me will remember, aroused a storm of controversy which was not settled finally until after my own student days.

Formerly, such vague terms as "miasm," "humor" and "virus" were used to explain the communicability of contagious diseases, but they have had to be discarded or to be newly defined by the bacteriologist.

It was in the sixties that Lister made his studies upon the relationship of micro-organisms to wound infection. The brilliant, revolutionary results of those studies are too well known to you to require elaboration, besides they belong to the history of nineteenth century surgery rather than to the history of internal medicine. They were, however, so important in settling the relationship of invisible parasites and diseases that they must be mentioned.

It was at this time, too, that Pasteur and Tyndall finally settled the controversy over spontaneous generation which had raged from time immemorial. The world at last felt convinced that even micro-organisms could not exist where an antecedent organism had not been.

It is needless to recapitulate the long list of discoveries rapidly made from this time onward of the causes of infectious diseases, by such men as Koch, Klebs, Loeffler, Fraenkel, Laveran, and many others.

HYGIENE.

Although medical men have been incited to search for the causes of disease in order that they might understand their nature better and therefore be able to treat them better, such studies naturally led more directly to the prevention than to the cure of disease. That is why the recent epoch-making bacteriological discoveries have greatly stimulated the study of preventive medicine. It is true that the prevention of disease has engaged the attention of medical men and statesmen since the earliest times, but the subject was not studied systematically before the last century.

Hygiene as a separate department of medicine, with a literature of its own was created only in the nineteenth century.

While, in the eighteenth century, much was done to improve the hygienic state of individuals, and as a result there began before its close to be a reduction in the mortality rate, which has continued up to the present time, public hygiene or organized efforts to prevent the spread of disease by state and civic interference, was not fairly established until very recently. Even to-day small

communities have no health officers or sanitary inspectors, and few regulations which are intended either to inform the people as to the relative healthfulness of towns and hamlets or by which the spread of disease is to be lessened. These facts show how new and undeveloped as yet the field of public hygiene is. The mortality statistics which have been gathered in cities since the middle of the last century make it possible to point out which cities are the healthiest, and which diseases are the most destructive. It is to be hoped that these statistics in the future will be supplemented by reports of the kinds and amount of illness, whether fatal or not, that may exist in a given place.

The knowledge recently acquired of infections and their spread has already been applied to their prevention. Such diseases as erysipelas, septicemia and tetanus no longer torment surgeons when they can make clean wounds. But as late as 1870 the first of these ailments was common in the hospitals of France. Puerperal fever is to-day as rare as it was common formerly. Typhus fever no longer exists in America, although not uncommon at the beginning of the last century.[2] Indeed, it is rarely seen in any civilized country to-day.

At the beginning of the nineteenth century smallpox was so prevalent that few persons reached adult life without having had the disease, and the mortality from it in childhood was great. What is the status of this disease to-day? I venture to say there are many physicians in this audience who have never seen a case, and that a majority of them have not treated more than four or five cases during their whole professional experience.

In the early days of this nation's history yellow fever spread to Philadelphia and New York, and provoked much discussion, for it was feared that it would prove as great a pest as cholera. A careful study of the disease and a consideration of the possibility of preventing it was referred to a committee of the New York Medical Society, which reported that yellow fever may be produced in any country by pestilential effluvia. How different is this conclusion from that of recent students of the subject, who assign to it a specific cause, which is transmitted from man to man by its host, mosquitoes.

Cholera has been brought to our shores several times in the last few years, but its spread has been prevented in each case. In Europe it has also been limited to compartively small areas. Within a year the plague has been found in this country, in Great Britain, and France, but has caused little alarm, so great is the confidence that it will be successfully suppressed. (Let us hope that this confidence is not misplaced.)

PROGRESS IN PREVENTIVE MEDICINE.

What has been accomplished during the last one hundred years by internal medicine the following statistics will show in part, although it must be remembered that mortality statistics gathered before the middle of the century are not reliable. It is estimated that in 1805 in New York City from 35 to 40 deaths occurred in every 1000 inhabitants. During the last decade it has averaged 20 in 1000, and has been as low as 19 in 1000. In 1847 the mortality in London from zymotic diseases was 23.26 per cent.; during the last two decades 19 to 20 per cent. In 1846 the deaths from consumption were 12.67 per cent.; now approximately 9 per cent. The mortality from diseases of the respiratory organs has been reduced in the same time from more than 12 per cent. to about 7, and the mortality from diseases of the digestive organs has diminished from about 6 per cent. to less than 5. In Chicago the mortality rate has fallen, with small fluctuations, from 46 and 64 deaths per 1000 inhabitants in the cholera years of 1852 and 1854 to 14 in 1898. The following diseases are among those in which the death-rate has fallen progressively: Cholera infantum, croup, diarrhea, diphtheria, dysentery, malaria, measles, scarlet fever and whooping cough. These are ailments the spread of which has been controlled either by isolation or by insuring the people purer food and water. Although the general mortality of Chicago, which is typical of the great cities of civilized countries, has improved, there are some diseases which are increasing in prevalence, notably nervous diseases, heart diseases, cancer, Bright's disease, bronchitis and pneumonia. To the discredit of my native city must it be said that the mortality from typhoid fever reached its highest point at the close of the century, during 1890, '91 and '92, although its cause and its mode of dissemination, as well as its prevention, were well known.[3]

The general lowering of the death rate is due to the improved hygiene of communities. In what the improvement has consisted is best shown by recalling some of the conditions under which people lived in 1800. At that time few cities had an adequate public water supply. In London water could be delivered at any house three times a week by one of the water companies; but most households depended upon wells. The sewerage system was quite as imperfect. Outhouses and cesspools were attached to each dwelling. The conveyance of sewage from houses by water did not become general until well into the last century. Ventilation of buildings, and especially of public halls, had attracted attention before the nineteenth century; but the real causes of danger from bad ventilation were not appreciated until bacteriology disclosed them.

In 1800 streets were not paved, and rarely cleaned. The habits of the people as regards eating and drinking were bestial. Excessively large quantities of food were consumed by all who could provide it. Alcoholic beverages were universally drunk, and generally in immoderate quantities. No disgrace attached to drunkenness; and it was customary for a man to drink several bottles of wine at a sitting.

Those who compose this audience appreciate how much illness must have been caused by these habits, and how much the relative abstemiousness or temperance of to-day has lessened the percentage of disease.

Prevention of diseases is only possible when a knowledge of their causes, their mode of dissemination, and methods for their suppression is possessed by all the people. Medical men alone can not stop their spread, nor will the making of laws do it. Only the intelligent coöperation of those who are ill and those who are well can accomplish it. It must not be expected, therefore, that as soon as the cause of a disease is discovered, that ailment can be suppressed. Time is required in which to educate all classes of people on that particular subject. Unfortunately, many persons are so obtuse that they will not believe in methods of prevention even when the fullest demonstration of their success has been made. A notable instance of this is seen in the recent repeal

2. Typhus forms an item in the mortality reports of Chicago (and other American cities) as late as 1886. This is probably because it was confused with typhoid. Not during the first quarter and rarely afterwards genuine typhus occurred in this country.

3. The more recent diversion of sewage from the water supply of that city has diminished the mortality from typhoid. Unfortunately, to-day very many communities are not awake to their own danger from this disease or to the possibility of its control.

of laws in England which made vaccination compulsory. The ease with which drinking water may be become contaminated and the danger to health from its contamination is not even now appreciated by the public. It is partly because such thorough knowledge is needed by the laymen that tuberculosis, diphtheria, pneumonia, typhoid fever and similar troubles have not been better controlled in the past. In order that in the twentieth century the fruits of the great discoveries of the last may be gathered, all members of the medical profession must fit themselves to teach their patients what is known of disease and its prevention. Those who are especially adapted to do so must disseminate their knowledge by popular discourses and essays. When hygiene shall be regarded by all classes as necessary and as much a matter of course as the use of the railroad, steamboat, telegraph, telephone, and labor-saving machines, then, but not until then, may striking results be expected.

THERAPEUTICS.

The wonderful, the revolutionary discoveries made by students of internal medicine during the nineteenth century are not always appreciated as they should be, for their results are often demonstrable only by statistics; and the dramatic rescue of individuals from certain death which the surgeon at times accomplishes, unfortunately can not be effected by the therapeutist. It is not in the nature of his art. Great progress, however, has been made in the use of medicines and remedial procedures. Good reasons can be given for their employment, and their mode of action can be explained. Empiricism no longer governs their use as it formerly did. The placing of therapeutics upon a scientific basis began in the last century when the physiological effect of drugs was first demonstrated by experiments upon animals.

No field of medical research needs cultivation so much or is more certain to yield a rich harvest than therapeutics. It is surprising that we have not a larger volume of accurate knowledge of the effect of drugs than we do possess. Of late pharmacology has been neglected for studies which have temporarily been more enticing to experimenters, such as bacteriology and experimental pathology. Moreover, a knowledge of these subjects is essential to enable a clinician to apply his therapeutic resources to the mitigation of suffering, the support of strength, and the elimination or destruction of noxious substances. One can safely prophesy that the exact utility and the limitations of drugs and medical procedures will be defined in the present century.

To accomplish this, not only is more knowledge required of the physiologic action of drugs, but also better means of accurately measuring their effects when they are given to patients. We know when pain is relieved we can sometimes measure effects produced upon the heart and blood vessels and temperature, but beyond this we depend for knowledge upon the impressions of physicians, impressions which must be corrected and often reversed by a wide experience. Clinicians possess only a few appliances or methods for the exact study of the sick. It is to be hoped that more will be discovered, and that they will also make it possible to register with accuracy the effect of drugs. When this is accomplished, undoubtedly a smaller number of useful drugs will be employed, but these with greater exactness.

It is true that drugs are often used to-day when they are not needed, because patients demand them; but this will be changed when laymen learn that it is the function of a physician to teach them what to do to give nature the best chance to effect repair, what to do to make themselves comfortable and to preserve life. When they learn that it is a physician's function to teach them how to protect others from the same ailment, to foretell the possibility of recovery or death, and to avert or forestall complications. Medical men should include time and faith in their materia medica as important means of effecting a restoration of health. I do not mean faith in a fetish procured in an apothecary's shop, but faith in the wisdom, honesty and disinterested devotion of physicians which will enable them to accomplish all that can be done for the suffering.

Although the greatest discoveries in the field of internal medicine have been applicable to the prevention of illness in the masses, much has also been done to increase the chances of recovery of individuals who are sick. I need call attention only to a few of the improvements in treatment which have been effected to remind you of more. Typhoid fever, which has been a scourge in all civilized countries, and constantly present in all larger centers of population, has not only been greatly lessened, sometimes even suppressed by improved hygiene, but the chances of recovery of the one who is sick with it have been increased several fold by improved methods of treatment. Twenty-five years ago the mortality from typhoid fever in the hospitals of the world was from 20 to 35 per cent.; to-day it is from 5 to 15. The better results are due to the cold baths which are used, to a more generous supply of fresh air, to proper feeding, and to protection against, or the prompt treatment of, complications.

One great therapeutic discovery has been made at the end of the nineteenth century—the discovery of antitoxins, the natural antidotes to the poisons of infectious agents. For a very long time it had been known that something developed in the human system during the course of many ailments which gave to the sufferer from them for a variable time immunity from a recurrence of the same disease. Until the existence of parasites and of poisons generated by them was proven, an antitoxin was of course unrecognizable. Moreover, the possibility of such a thing in diseases, one attack of which did not cause immunity to others, was not even suspected. But diphtheria antitoxin, the most efficient of those of which we know anything, is one belonging to this last group of ailments. The chemical composition of antitoxins is yet to be discovered. Since antitoxin has been used the mortality from diphtheria has been reduced about one-half. The most extensive collection[4] of statistics gathered from all civilized countries shows that when antitoxin is used on the first day of the disease, the mortality is 5 per cent, increasing rapidly to 30 per cent when used on the fourth day or later. Before its employment, the average mortality of the disease was from 25 to 35 per cent. To effect a still greater reduction in the death-rate from this ailment, it is necessary that it be recognized early, and that antitoxin be employed more generally as a preventive for those who have been exposed.

That tetanus antitoxin and plague antitoxin are valuable is admitted. Many others, such as pneumonia, typhoid, tubercle, scarlet fever, erysipelas and streptococcus antitoxins are still in the experimental stage. But even though it should be found that few natural antitoxins can be isolated for use as remedies, those already discovered confirm physicians in the hope that specifics will be found some day.

4. Das Oesterischen Sanitätswesen, No. 52, 1900.

Another therapeutic discovery made at the close of the century which has thrown a flood of light upon some obscure points in physiology and pathology, and has restored to usefulness many who were formerly incapacitated and incurable, is that of internal secretions, and especially the role of the secretion of the thyroid gland. Ingredients in the thyroid, suprarenal bodies, and ovaries, produce as definite effects upon the living body as many extracts from plants or synthetic chemicals. The pituitary body, the thymus, and bone marrow may also have a value as yet undetermined. The rescue of those suffering from myxedema and cretinism by the administration of thyroid is one of the few happy dramatic incidents which fall to the lot of the practitioner of medicine.

That a much larger proportion of recoveries from tuberculosis occur to-day than formerly is evident from the statistics of this disease, but this lessened mortality is not due to prevention only. Trudeau has estimated that 18 per cent of all persons have tuberculous lesions, because a reaction to tuberculin can be demonstrated in that proportion. This statement is confirmed by Councilman, who states that his autopsy statistics show that at least 17 per cent. of all who die have had this disease. But in spite of this prevalence the mortality from the ailment is lessening.

Rabies and tetanus are two diseases which until recently were thought to be incurable. Rabies can be suppressed by killing unowned dogs and by muzzling the rest. Upon this point the following statistics from England are very instructive. In 1887, 217 deaths occurred in Great Britain from rabies; in 1888, 160; in 1889, 312. A muzzling law was then enforced. In 1891 the death-rate from the disease fell to 129; in 1892, to 38. The muzzling ordinance was repealed, with the result that in 1894, 248 deaths occurred from mad dog bites, and 672 in 1895. Again muzzling was made compulsory. The death-rate once more diminished; in 1897 it was 151; in 1898, 17; in 1899, 9, and in 1900, none!

Pasteur's great discovery of a method of attenuating the virus of rabies and rendering those who have been bitten by mad dogs immune by rapidly accustoming them to stronger and stronger viruses has reduced the mortality from 16 to 0.33 per cent.

Tetanus, quite common in hospitals formerly, is now prevented by properly cleansing and protecting wounds. It has become so rare a disease that to-day most students do not see a case of it during their college course.

The nineteenth century will be known in the history of medicine as the century of experimental medicine, for it is in that field that the greatest discoveries of the age have been made. The names of Pasteur, Koch and Lister will forever be linked with it as representing its greatest achievements. But these achievements would not have been possible had not the physicist perfected the microscope, and had not Virchow and his pupils explored the field of cellular pathology to its farthest limits. Around Virchow's name as a banner will historians gather the achievements in medicine during the early and middle portions of the century, and around Pasteur's those of its close.

If our greatest needs conditioned the growth of knowledge, we could prophecy what will be the great field of research of the twentieth century, but history teaches us that our needs can often not be met until some sister science has grown, or new methods of experimenting have been devised. Therefore, the future must remain a blank to us. However, we are more apt to accomplish what is needed if the problems are kept clearly in mind. We greatly need more exact methods of clinical study, more accurate knowledge of the effect of remedial agents and procedures, but more than all else we need a knowledge of the changes which take place in the living tissues in health as well as in disease.

The anatomist has resolved the cellular structure of the body; the physiologist, the laws which govern the action of its organs and the chemic changes which are wrought upon its surfaces; the bacteriologist has discovered the parasites that infest, and often destroy it; the pathologist has described the anatomical changes which disease produces; the clinician has linked all these facts together and has discovered ways of seeing with the intellectual eye disturbances of physiologic function, of determining their cause, and of anticipating the anatomic changes which they will produce. But this does not satisfy us, we want a knowledge of the atomic and molecular structure of cells, of the changes which take place in the atoms and molecules in health and in disease, and of the effect of medicines and remedial procedures upon them. This knowledge chemistry must give us. I feel sure that, standing as we do at the beginning of a new century, expecting greater developments in it than in the last one, we are halting before new discoveries in chemistry, waiting for new methods of studying metabolism in microscopic portions of tissue. When this knowledge is vouchsafed, medicine will make another stride as great as was made when, by the perfected microscope, cellular pathology and bacteriology became possible.

THE VALUE OF CLINICAL MICROSCOPY, BACTERIOLOGY AND CHEMISTRY IN SURGICAL PRACTICE.

ORATION ON SURGERY BEFORE THE FIFTY-SECOND ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, AT ST. PAUL, MINN., JUNE 4-7, 1901.

JOHN A. WYETH, M.D.
NEW YORK CITY.

For many years, almost without exception, my predecessors in the address on surgery have devoted their labors to the exposition of some general or special subject in the domain of operative surgery, and while I would in no measure detract from the value of a thorough technical knowledge, we should not in our attention to the *art*, fall short of a proper appreciation of the *science* of surgery.

The experienced surgeon soon learns that it requires more than asepsis and the rapid and skilful performance of an operation to achieve the fullest measure of success; that although a thorough practical knowledge of regional anatomy is essential in the highest degree to the conscientious fulfilment of the professional obligation, it is equally important that there be called into requisition the invaluable aid which laboratory research alone can give in determining an accurate diagnosis; in indicating the most rational measures of treatment not only in the preparation of a patient for an operation, and in the selection of the safest anesthetic, but for the postoperative management of the case, and in removing as far as possible all doubts as to the prognosis.

Chemical analysis of the normal and abnormal secretions and excretions of the body, *clinical microscopy* and *bacteriology* should form a part of the educational requirement of every surgeon. I do not insist that the busy practitioner should attempt to master all the intricate processes of the laboratory, for this is only possible

to one who devotes years of patient labor in the fascinating department of science, but he should possess that practical knowledge of the chemistry of the body in health and disease, and of clinical microscopy and bacteriology which any diligent student, under a competent teacher, and in a properly equipped laboratory, should be able to acquire in a three months' course of study.

The instances are exceptional in practice where this knowledge can not be applied with great benefit to the patient, and with satisfaction to the surgeon. It is naturally of greatest value in the cases where no emergency for immediate operation exists, but its advantages are not wanting in these rarer cases, since it comes to his aid in the post-operative period.

Laboratory research, especially in the department of bacteriology, has placed not only the medical profession, but the entire human family under lasting obligations for the great benefits which have already been derived from its discoveries, and it may be safely said that it has done more than all else in accomplishing the revolution in surgical thought and practice which has taken place within the last two decades. One of the most notable illustrations of this great advance is the triumph which has been achieved over that once fatal disease, diphtheria.

The discovery by Klebs in 1883, and the isolation and cultivation in 1884 by Loeffler of the bacillus of diphtheria had its logical sequence in Behring's invaluable discovery (subsequently elaborated by Roux) that the blood of animals, especially that of the horse, rendered immune to diphtheria by inoculation, first with attenuated, and then with more virulent organisms, contained a substance capable of neutralizing the effects of the bacilli or their *toxin* when simultaneously or subsequently inoculated in non-protected animals.

This antitoxin serum in its dose of 10 c.c. of either the 600, 1000 or 1500 *immunizing units* is potent not only to arrest the destructive processes which formerly characterized this disease, but to prevent the infection of those who have been exposed to the contagion. How great is the importance of the knowledge that these bacilli are not only always present in the throat of a patient suffering from diphtheria, but that they are frequently found on the nasopharyngeal surfaces and tonsils of persons free from systemic infection, and as shown by Biggs, Parke and Beebe of New York, they may remain as long as five weeks after the membrane has been discharged from infected subjects, all of which points to the necessity for the isolation of the infected individual, and the careful disinfection of the throats of those who have been about diphtheria cases. (McFarland.)

The statistics of Professor Welch of Johns Hopkins University show that the ratio of mortality as a result of these discoveries has been reduced more than 55 per cent., and that in 115 cases, in which by reason of an early diagnosis, the treatment of serum antitoxin was begun within the first three days of the disease, the mortality was only 8.5 per cent. In 546 cases in which the remedy was begun after the third day of the disease, the mortality was 27.8 per cent., the ratio of mortality increasing with fatal precision as treatment was delayed.

To the surgeon, one of the most gratifying results of this great triumph of the laboratory is the fact that he is now rarely called upon to perform the operation of tracheotomy which was formerly distressingly frequent; nor to witness the sufferings associated with intubation of the larynx. A professional friend in the department of diseases of children informed me recently that whereas a few years ago he had from 10 to 20 intubations of the larynx on account of diphtheria in every month, he now, since the serum therapy was practiced, averaged only one or two.

I believe that what is true of this disease is true of all infectious processes, and that as our knowledge expands, a safe immunizing serum will be discovered for each special toxemia. Even now it would seem that this proposition is proved in other infections in which like diphtheria the pathogenic organisms are localized at the seat of infection, their toxic products alone entering the tissues through the circulation.

Of this type is the spirillum or "comma" bacillus discovered by Koch in 1884 in the intestinal contents of patients suffering from Asiatic cholera. These germs are not found in the deeper organs, the morbid changes in the tissues being due to their toxin. Immunizing injections of cholera cultures have already been experimentally and successfully employed, and promise rich results.

In this same group, bacteriologists claim a place for the diplococcus micrococcus lanceolatus of Fraenkel, the *pneumococcus*. Sternberg and Pasteur isolated this germ in 1880, and in 1884 Fraenkel demonstrated it as the prevailing organism found in the sputum of croupous pneumonia. Very late investigations give encouragement to the hope that serum therapy will soon be applied in the early arrest of the invasion of this most painful and fatal malady. Though pneumonia is strictly a medical disease, its early recognition as a surgical complication, or in view of an anticipated operation, is of very great importance. In a recent case which came under my observation at our laboratory, a specimen of sputum was sent in for bacteriological study. It was not blood-stained or "brick-dust," but yellowish-white in color like the ordinary sputum of bronchitis, and was supposed to be "grippe," or tuberculosis. The bacillus of tuberculosis was not present, but numerous micrococci lanceolati were discovered, and the laboratory diagnosis was made and confirmed within twenty-four hours by the well-recognized symptoms of consolidation with the "brick-dust" expectoration of this disease which supervened.

Tetanus toxemia, or "lock-jaw," the organism producing which was discovered by Nicolaier in 1894, and which for years has baffled the most strenuous efforts of the bacteriologist and clinician seems at last to be classified with the controlable infections. Professor Osler, in the last edition of his "Practice of Medicine," says the immunizing serum of Tizzoni has been successfully and encouragingly employed in doses of 2.25 grams for the first dose, and 0.6 grams for subsequent doses. Of 113 cases treated by this method 63 per cent. recovered.

It was not until the discovery of the bacillus of typhoid by Eberth in 1880 and the pure cultures of this germ secured by Gaffky in 1884, that there was made possible in the vast majority of cases of typhoid fever a positive diagnosis.

The demonstration of Widal that when 10 drops of a twenty-four hour bouillon culture of the bacilli typhi were added and thoroughly mixed with one or two drops of serum from the blood of a typhoid patient, the bacilli lose their motility and become agglutinated in masses, was one of the most brilliant advances in clinical bacteriology, and of great value in surgical diagnosis.

In many of the lesions of the abdominal viscera, and especially in those located in that battle-ground of surgery, the right iliac fossa, where the physical signs and the febrile movement may suggest either beginning typhoid, intestinal toxemia or a pyogenic sepsis, an early diagnosis may be determined in no other way than by the aid of the laboratory.

The practitioner who has not called into requisition the invaluable aid which bacteriology affords in the differentiation of those too often obscure intraperitoneal lesions, can not appreciate the satisfaction which this practical application affords. How often the safety of a patient hangs upon even a few hours time, and alas, how often this precious time is wasted in the uncertainties of diagnosis, when a resort to the demonstration of science, available to all, would have plainly indicated the proper method of procedure. We know too well the fallacy of relying upon the ordinary subjective symptoms, and even some of the objective symptoms afford us no accurate clue to the pathological process which may exist. The pulse and the temperature of commencing typhoid may well be mistaken for the pulse and temperature of an appendicitis. The pain and muscular resistance over the right iliac and the right abdominal region are in many instances practically alike. The nausea, the vomiting, and the general sense of uneasiness point neither directly to the one or to the other disease, but in a crucial test by Widal's reaction, with the blood count pointing to the presence or absence of a leucocytosis, the question is quickly settled. I have seen all the symptoms of appendicitis present in cases in which the blood count contradicted a pyogenic sepsis, and in which Widal's reaction told the story of typhoid. On the contrary, I have dealt with cases which ordinarily would have been most perplexing, in which all the symptoms of typhoid prevailed at a period when it was too early to recognize this disease by Widal's test, and a leucocytosis of from 15,000 to 21,000 proved at the earliest possible moment that the case was one for immediate operation.[1]

The discovery by Bollinger in 1877 made the diagnosis of that comparatively rare affection, actinomycosis, clear. In examining the yellow granules and accompanying pus discharged from an infected area he recognized the ray fungus or actinomyces. More recent researches have shown this fungus to be composed of bacilli in various stages of development, some being spores and some more perfectly developed organisms.

In another fortunately rare disease, malignant pustule, caused by the lodgment in an abrasion of the bacillus anthracis, we are indebted to the laboratory for our knowledge of its etiology. The anthrax bacillus discovered by Devaine in 1863 is not usually found in the blood except in the most malignant cases and in the last stages of fatal infection, but they can be demonstrated in the pustule of inoculation with the microscope or by cultures.

Roux and Chamberland, according to McFarland, have found that filtered cultures will produce immunity when properly introduced into animals, and we reasonably hope from these experiments that the serum treatment will before long be made applicable to infected human beings.

Another rare organism is the bacillus of malignant edema, which was discovered by Pasteur in 1875 and called by him *vibrion septique*. There are only two cases of this disease so far reported in man, and they were subjects of abnormally low resistance infected by the hypodermatic administration of a product of musk.

The bacillus pestis or bubonic plague organism was discovered in 1894 simultaneously by Yersin and Kitasato, in blood drawn from the finger tips of infected individuals, and in the broken-down lymph glands, and is described by Kitasato as greatly resembling the micro-organism of chicken cholera.

Bacteriological research has robbed the puerperal state of much of the anxiety and dread which formerly attended this ordeal, not only in preventing sepsis, but in recognizing the infections already established in time to prevent a general peritonitis or septicemia. The puerperal uterus or this organ when the seat of non-puerperal endometritis offers an ideal field for bacterial proliferation and invasion, since septic organisms entering the cavity may rapidly penetrate the endometrium and enter the lymph channels whence they pass into the venous sinuses and lymphatics of the pelvis.

Prof. W. R. Pryor, in a paper read before the New York State Medical Association in 1900, says, "puerperal sepsis if not rapidly fatal almost always produces lesions which seriously damage the pelvic organs or the viscera," and that "time is in this serious condition an important element." He recommends the early employment of the Döderlein tube, which, after sterilization, is passed into the uterus, being protected from contact until the fundus is reached. From the serum and débris thus obtained cultures are made, and the character of the operation—either curettage or hysterectomy—determined by the result of bacteriological investigation.

Not only does the laboratory come to our assistance in the diagnosis of certain obscure surgical lesions of the stomach, but it is still more valuable as an aid in arriving at the exact condition of the digestive functions of this organ, any derangement of which it is at times exceedingly important to correct in order to bring a patient into suitable condition to stand an operation. Thus it is important to determine in certain instances whether or not free hydrochloric acid exists in this organ, and while the total quantity poured into the stomach in the digestive process can not be accurately measured, clinical chemistry can closely estimate the total quantity found at a given moment during digestion. The acid-combining power of the proteids is known, and by certain tests it is feasible to estimate

1. Two of the cases occurring in my own work within the last few months may emphasize the great value of this technique.

A man of 30 was seized with quite severe pains which were confined to the region of the caecum and appendix. Upon palpation there was well marked resistance in the muscles immediately over these organs which was not observed in any other part of the abdominal wall. He had vomited on one or two occasions and the temperature ranged from 101 to 103 F. on the second day of this attack. The questions which were presented to the consultants were whether this temperature could be accounted for by intestinal toxemia, by appendicitis, or incipient typhoid. Although it was too early in the history of a typhoid case to encourage the belief that Widal's reaction would be present, this was made, and with negative results. On the following day, the symptoms still pointing toward typoid fever, a careful blood count was made and the leucocytes did not count over 7000. Assured from this that no dangerous pyogenic process was present, the idea of operation, even exploratory, was abandoned until the examination might be repeated on the succeeding day. A second careful blood count showed no leucocytosis, and on the fourth day, although Widal's reaction was still absent, the case was declared to be typhoid, and the subsequent history proved the diagnosis to be correct, since a few days later the reaction of typhoid was present, and the patient went through the regular stages of this fever.

In a second case, a male patient, 45 years of age, there was a typical typhoid tongue, temperature ranged from 100 to 103.5 F., tenderness and muscular resistance in the right iliac fossa and loose discharges from the bowels not unlike those frequently met with in typhoid. Widal's reaction was tried with negative results on three successive days. The blood count on the fifth day showed the leucocytes numbering 21,000, justifying a diagnosis which excluded typhoid, and confirmed the suspicion of pyogenic sepsis.

sufficiently close for a satisfactory diagnosis, the quantity of hydrochloric acid secreted. The small quantity of hydrochloric acid which combines with ingested inorganic elements is lost to gastric digestion, serving as it does its function in this process in the intestines. The far greater proportion combines with the proteids in satisfactory quantity, while any excess remains free in the stomach.

It is clear, as stated by Van Valzah and Nisbit, that the hydrochloric acid which combines with the proteids, and that which remains free, together roughly represent the activity of acid secretion. It is logical then to conclude that the quantity of hydrochloric acid loosely combined with albumin, together with the quantity remaining free in the contents withdrawn at the end of a particular time after eating a particular meal is a practical and clinical measure of the secretive activity of the peptic glands, and of the digestive work of the stomach. All of this is made sufficiently exact for practical purposes by the laboratory method of analysis after the simple test-breakfast of Ewald and Boas, or the more elaborate test-meal as recommended by Germain-Sée.[2]

The presence of lactic acid in the stomach contents as shown by Kelling's test[3] has a distinct diagnostic value, since it takes place in comparatively rare conditions, and since these conditions are seldom fulfilled except when carcinoma is present.

Lactic acid is dependent upon the presence of a special bacillus which thrives in the stomach under abnormal conditions, and is capable of converting glucose and lactose into lactic and carbonic acid. Boas goes so far as to insist that the persistent presence of lactic acid in noteworthy quantity during the digestion of a saucer of oatmeal, chemically free from lactic acid, is a specific sign of carcinoma of the stomach.

While the stomach may under varying conditions contain hosts of various bacteria in addition to the one just considered, there are only three others that are of importance as pathogenic organisms. First, the *sarcinæ ventriculi* (in their usual cube arrangement) which when found indicate insufficiency of the stomach muscle due to non-malignant obstruction. They are not found in carcinoma, since they perish in the presence of lactic acid, which, as we have just shown, is so common in malignant diseases of this organ.

Another micro-organism is the *yeast plant* also found when motor insufficiency exists. It may be present when the stomach contents are alkaline, neutral or acid.

The *bacillus geniculatus* is present under the same conditions which produce the lactic acid organism and is considered also to be suggestive of carcinoma.

When the presence of blood is suspected in the stomach and is not clearly defined by the microscope, chemistry comes to our aid in its recognition by the glacial acetic acid and ether test.[4]

A study of the discharges from the rectum is as yet of little value to the surgeon. Beyond the recognition of blood or pus, or cast-off cell elements in certain malignant neoplasms, there is but a single organism which is of real diagnostic value, namely, the ameba of dysentery, described by Lamb in 1859, which is a motile mass of protoplasm about 20 micromillimeters in diameter containing a single nucleus, and one or several vacuoles.

In the differentiation between the pathogenic organisms of specific and non-specific urethritis, microscopy and bacteriology are our only infallible guides. They teach us to eliminate the various bacteria found in the external genital and urinary passages, not bearing directly upon the etiology of urethritis, and to recognize distinctly the two forms of diplococcus, the gonococcus of Neisser, and the pseudo-diplococcus, which, while not morphologically different from the specific disease-producing organism, can be readily distinguished by special modes of staining as well as by cultures. In the daily routine of practice the exact nature of every suspicious urethral discharge should be subjected to careful scrutiny. The patient is entitled to the satisfaction of a negative result, which is easily demonstrated by staining the smear with methylene blue which clearly defines both organisms. If no cocci are revealed all anxiety is put at rest, but if there are present both varieties of these organisms, occupying as they do, the protoplasm of the pus corpuscles, a further research and the differentiation of the true form from the false diplococcus is imperative. The pseudo-coccus retains the violet color of the aniline-gentian water violet stain, while with careful laboratory technique the addition of the Bismarck brown brings out the gonococcus, the protoplasm of a single pus corpuscle showing at times both the blue stain of the pseudo-coccus and the diplococcus of Neisser which retains the brown color.[5]

2. The simplest method is that known as the test breakfast of Ewald and Boas in which on an empty stomach, usually in the early morning, a breakfast roll which contains about 5 gm. of proteids, 39 gm. of carbohydrates, 1/3 gm. of fat, 3/4 of a gm. of ash, and weighs 70 gm., and 350 c.c. of water (about a glass and a half) are taken. The bread should be thoroughly chewed and insalivated before being swallowed with the water. Usually in one hour's time a tube is introduced and the contents of the stomach withdrawn, usually by expression, or by siphonage and then filtered. An estimate of the acidity of the filtered contents is made by using a deci normal solution of potash or soda. The number of c.c. of this solution which will neutralize 100 c.c. of the filtered contents of the stomach expresses in figures the acidity of the fluid withdrawn. At the end of an hour, under approximately normal conditions of digestion, the total acidity should be 50 to 60, the hydrochloric acid albumin 30 to 40, the free hydrochloric acid 10 to 20. Any departure from this rule shows the abnormal absence or excess of this important agent.

The test meal of Germain-See is at times preferable, since it contains a larger quantity of proteids than the test breakfast of Ewald and Boas just given, but the method of procedure is practically the same. The presence of hydrochloric acid can be recognized by Gunzborg's reagent which is composed of:

Phloroglucin	2 gr.
Vanillin	1 gr.
Alcohol (absolute)	30 gr.

By spreading three or four drops of this reagent in a porcelain crucible, adding upon this the same quantity of the filtered contents, and slowly warming the crucible, after several seconds, a red color appears, and at times the red crystals of free hydrochloric acid are seen. Or the simpler method of employing a filtered paper which has been soaked in a 0.5 per cent alcoholic solution of diamethylamidiazo-benzol and dried. This, in the presence of a trace of free hydrochloric acid turns distinctly red.

3. Kelling's test consists of 5 c.c. of the filtrate diluted to 50 c.c. with distilled water, to which one or two drops of official 5 per cent. solution of the perchlorid of iron are added. The yellowish-green tinge indicates the presence of lactic acid.

4. To 10 c.c. of the filtered contents add 3 c.c. of glacial acetic acid, and extract the coloring matter of the blood by shaking with 5 c.c. of ether. This turns the ether extract brown. When this discoloration does not take place there is no blood. To carry the demonstration further, to the brownish decanted ether extract, 10 drops of fresh tincture of guiac with a few drops of peroxid of hydrogen are added. After vigorously shaking, the mixture becomes clear blue if blood is present.

5. Dr. Jeffreys, the director of the laboratory in the New York Polyclinic employs the following differential stain:

Use Gram's stain followed by a contrast stain, such as Bismarck Brown. To prepare this stain proceed as follows:

Prepare aniline water by emulsifying 8 drops of aniline oil in about 10 cubic centimeters of water. Filter through a wet filter. To this aniline water, add about one-tenth its bulk of a saturated alcoholic solution of gentian violet. Stain smear with this "aniline water gentian violet" one or two minutes. Wash in warm water and then immerse in Gram's solution for one minute. The formula for this solution is as follows:

Iodin	1 gram.
Iodid of potash	2 grams.
Water	300 c.c.

Thoroughly wash in 95 per cent. alcohol until no more blue appears to wash out; then wash in water. Counterstain for one minute with a saturated solution of Bismarck brown in 3 per cent. aqueous solution of carbolic acid. Wash, dry, and mount in balsam. After this treatment, pseudo-gonococci should be stained violet, and gonococci should be brown.

Bearing in mind the fact that the gonococcus of Neisser may remain dormant in these passages for months, and, as maintained by some observers, for years, incapable of a further inoculation of the seemingly immunized patient, but capable of exciting the most acute and injurious inflammation in an innocent victim, it becomes a matter of the greatest importance to subject to most careful study the external genito-urinary passages where an infection has once existed. It has been demonstrated that an artificial urethritis as that which nitrate of silver produces will develop the dormant gonococci and cause their presence in the discharge.

Keys and Chetwood, in their excellent volume on venereal diseases, place well-deserved emphasis upon the value of the Gram test for recognizing these organisms. They properly insist that the diplococci should be of the recognized size and have within the protoplasm of the pus corpuscle their proper shape and arrangement and remain negative to Gram's staining. Even when cultures are made to demonstrate the specific organisms beyond all doubt, resort should still be had to the Gram staining as a final means of identification.

In cases of pyelitis, many of the difficulties which formerly stood in the way of differential diagnosis betwen renal calculi, simple pyogenic pyelitis or the presence of tubercular disease in this organ, are now overcome by the careful methods of the laboratory.

The presence of the bacilli of tuberculosis in one or both kidneys, even when they are exceedingly infrequent in the discharge, can be demonstrated in urine drawn by urethral catheterization, or by the more simple process of bladder segregation, when the suspected organisms are with other detritus thrown down by the centrifuge. The carbol-fuchsin stain decolorized with 5 per cent. sulphuric acid, brings out in brilliant red the outlines of the bacilli of tuberculosis, while the addition of 95 per cent. alcohol decolorizes the smegma bacillus, and thus eliminates this possible source of error to any but the more expert laboratory workers.[6]

In the effort to arrive at the general condition of a patient, the chemical, microscopical and bacteriological study of the urine is only second in importance to that of the blood, and when we consider the additional and exact information which can thus be obtained concerning any pathological process at any point in the urinary tract, the value of this analysis is very materially increased. A careful study of the urine is always indicated before determining what anesthetic it is safest to employ in the operation to be undertaken. When there is no important lesion of the heart, either in its valvular mechanism or in the blood supply and nutrition of its muscular walls, few surgeons, I hold, would employ ether in a protracted operation in which there was any suggestion of an acute nephritis, or in certain chronic forms of Bright's disease.

It is commendable practice to study through several days the quantity of urine passed, keeping accurate measurement, as well as making a qualitative analysis of that which is passed under conditions as near as possible similar to those to which the patient had been subjected before coming under observation, and then under conditions of rest, with proper alimentation and the free opening of the alimentary canal with calomel and Carlsbad salts (which agents in my experience most readily do away with fermentation and the production of gases in the bowels) to note the changes which occur in excretion.

The presence of oxyluria is in my opinion a contra-indication to a serious surgical operation, for the reason that it is pathognomonic of a disturbed nutrition due to insufficiency of the digestive fluids, and to fermentative processes in the intestinal tract.

An excess of *uric acid,* evident in the rosettes or rhombic or quadrate crystals (one-sixth objective), found in the urine *which has not been passed* more than three or four hours, has also a pathological significance scarcely less than that of oxyluria. It indicates a condition of defective nutrition which is part of the gouty or rheumatic diathesis, predisposes to chronic nephritis and is one of the symptoms of various acute inflammatory processes, of leukemia, cirrhosis of the liver, gastro-intestinal catarrh, and is often present in diabetes mellitus.

The chemistry and microscopy of the urine further informs us when ammoniacal decomposition of the urine is taking place within the bladder, suggesting insufficiency of this organ due to obstruction of the urethra or to atony of the bladder muscle. The large rhombic masses or stellate and cross-shaped rosettes of the triple phosphates only exist in these abnormal conditions of the bladder, and with the brownish colored thorn-like crystals or urate of ammonia are important aids to diagnosis.

The presence of epithelia from the various portions of the urinary or genito-urinary tract, of spermatozoa and various bacteria chiefly pyogenic in character, are further and well-recognized evidence of the value of the microscope in surgical diagnosis. In rarer instances, the hooklets of echinococcus, the embryos of filaria and the ova of hematobium Bilharzii are thus discovered in the urine. The writer has been able once to demonstrate the presence of the eggs of the last-named parasite in the bloody urine of a missionary in Africa where he had by long residence acquired the disease.

From the laboratory we are taught the well-known tests for albumin and sugar by which all sources of error may be eliminated in determining not only their presence but the quantitative analyses as well. The pathological conditions in which these substances are excreted are at times exceedingly grave, and it is of vital importance that their presence be discovered so that timely and judicious treatment may be instituted, or operation avoided which under such unfortunate conditions would be invariably fatal.[7]

In glycosuria the surgeon must know whether he is dealing with what Pavey designates as alimentary diabetes, in which the sugar eliminated by the urine is derived solely from the food as result of defective carbo-

6. The following process is used at the Polyclinic Laboratory in determining the presence of the tubercular bacillus in the urine and feces. The sediment is thrown down in the centrifuge, the smear dried slowly over the Bunsen burner and stained with carbol-fuchsin, which is then warmed over the Bunsen burner for three or four minutes without being dried. Then wash with water and decolorize with 5 per cent sulphuric acid, and again wash with water. After this add 95 per cent alcohol, which decolorizes the smegma bacillus and again wash in water, counterstain with Methylene blue, and dry. With the 1/12 oil immersion, the clusters of tubercular bacilli are readily seen.

7. To determine the presence of albumin, the nitric acid and heat test is classical and reliable. The simplest quantitative analysis as recommended by Hare is to fill the tube for the centrifuge to the 10 c.c. mark with urine, to which is added 2½ c.c. of potassium ferrocyanide solution (one part to ten) 1½ c.c. of acetic acid is also added. After mixing the fluids well the centrifuge is rotated until the albumin is precipitated. Every 1/10 c.c. mark on the tube represents 1 per cent. by bulk of albumin; that is, if the albumin extends up to the 3½ c.c. mark, the albumin amounts to 35 per cent.

Fehling's test in the demonstration of sugar and the quantitative analysis by means of yeast fermentation is another important laboratory process, without recourse to which the surgeon in a certain group of cases can not satisfactorily work.

hydrate assimilation; or whether that almost hopeless condition of composite diabetes in which abnormal disintegration is taking place, is present.

No less important is the estimate of the amount of urea which is being eliminated in a given quantity of urine. Employing the simple apparatus of Doremus with the sodium hypobromite solution[8] within a few minutes time, by the evolution of nitrogen gas in the presence of this, the amount of urea which is being carried off by the kidneys is readily demonstrable.

Non-parasitic chyluria (that form not due to the presence of filaria) is a rare affection, but it does exist, the fluid coagulating almost like jelly. In these conditions the microscope shows little that is pathological excepting some minute granules and oil droplets similar to those in milk. (Osler.)

The presence of blood in the urine, even in the most minute quantities, can in almost all cases be recognized by the microscope, and in those exceptional instances of hemoglobinuria in which the corpuscles have disappeared, the blood crystals of Teischmann may be recognized by the addition of a drop of strong acetic acid to a few drops of urine placed upon a watch glass. For this condition of blood pigment in the urine in which the blood-cells are absent, Osler suggests the name methemoglobin. He further states that when granular pigment or darkly-pigmented urates or fragments of blood-disks do not point clearly to the presence of blood, the two absorption bands of oxyhemoglobin, and more commonly, the three absorption bands of methemoglobin, of which the one in the red near G is characteristic, may be determined by the spectroscope. In general, however, the red and white blood corpuscles and filaments of clot are clearly recognizable with the one-sixth objective. Even without the microscope the presence of a very minute quantity of blood distributed through the urine can be recognized by Heller's test of adding a few c.c. of urine to a drop or two of strong solution of caustic soda, and boiling the mixture. If blood is present a bottle-green color is produced and the phosphates fall to the bottom of the test-tube in fine flakes, tinged brownish-red by the coloring matter of the blood. (Hare.)

When blood is found in the urine as a complication of papilloma of the bladder, particles of the broken-down tumor are very frequently found in the urine, and under the microscope the epithelial elements of this neoplasm are easily recognized and point clearly to the source of the hemorrhage. In hemorrhage from the kidney substance blood casts tell unmistakably of its source.

Chemistry demonstrates in the urine the presence of indican or indoxyl sulphate of potassium, a product resulting from the decomposition of albuminous products in the intestinal tract under the influence of bacteria. It is always suggestive of persistent constipation, is found in obstruction of the intestinal canal, carcinoma of the liver or stomach, in peritonitis, and is one of the symptoms of pernicious anemia. Urine containing this substance if treated with two or three times its volume of hydrochloric acid turns a violet color.

A careful analysis of the various casts found in the urine under different conditions is of inestimable value. Blood casts indicating not only hemorrhage from the kidney, but acute inflammatory conditions, and casts composed of pus corpuscles and studded with micrococci suggesting pyelonephritis, are most valuable results in laboratory research. It also tells us of the existence of granular casts which indicate a chronic or subacute inflammatory process in the substance of the kidney, which is accentuated when fatty casts are found, and that hyaline casts have a grave significance, as they are most frequently associated with chronic interstitial nephritis, and that the waxy variety is very common in chronic suppurative processes, usually in the bones and joints.

To-day, one of the most attractive subjects of laboratory research is the blood, and although hematology is practically in its infancy, many valuable discoveries have already been made, and in the proper study of a patient, a knowledge of the blood is as essential as that of the urine. It may throw no light upon many cases, but the reward will be tenfold in that particular instance where the diagnosis is made definite and clear. It is necessary to know the normal blood thoroughly by constant practice in order to recognize the abnormal changes which may be present in a given case, and I can think of no more useful way of spending the time not taken up by practice than by going over these important features of laboratory technique.

A knowledge of hematology enables the surgeon to detect any form of anemia and to determine whether it is a type of blood impoverishment which can be corrected, or whether it is of the graver or more pernicious forms which would either preclude an operation, or if this were absolutely necessary, would enable him to anounce to those entitled to information, the gravity of the outlook. In ordinary practice it is not always essential to differentiate between a pernicious anemia or a leukemia, or whether this latter condition is present in the lymphatic or splenic-myelogenous form, for the reason that all of these graver varieties call a halt to operative measures when these can be avoided. But the anemia which comes from malnutrition or malaria, or chlorosis, can be positively diagnosticated by a study of the blood.

The richness of the hemoglobin may in a fair measure be determined by the comparative color test of the blood in proper solution, as observed through von Fleischl's hemometer. When a low percentage of hemoglobin is present, it is an indication to avoid any operative shock until the impoverished condition of the blood can be corrected by proper nourishment, by rest, or by medication, when this is positively indicated. This also suggests the aid of the microscope in a further investigation as to the condition of the corpuscular elements of the blood. It is advised by Mikulicz never to operate when the register of the hemometer shows less than 35, and it would probably be safer to place the standard ten or fifteen points higher. Even in the simple forms of anemia, the degenerative changes in the blood elements, especially in the red cells, are easily recognized, and are full of valuable suggestions.

When the red cells are near the normal count (about 6,000,000 to the c.c.) they may still show certain characteristic deformities of individual cells (poikilocytosis) as well as variations in size in the presence of microcytes and macrocytes which appear in the field, and which are not seen in the normal blood. If the red cells are paler in color than normal, if they undergo crena-

8. Solution A, bromin and sodium bromite each 125 grams, water 1000 c.c. Solution B, sodium hydrate 400 grams, water 1000 c.c. Take of A and B each one part, water three parts. They are only to be mixed when needed for use. After the tube has been filled with the solution the pipette is filled with urine to the one c.c. and the point carefully introduced beyond the bend. The urine in the pipette is then expelled by compression of the bulb, care being taken not to force any air into the tube.

tion or breaking at the edges, and do not form rouleaux, it is evident that anemia is present.[9] The danger signals are still further in evidence when nucleated red cells (normoblasts) appear, and when there is added to these either the giant red cells (megaloblasts) or abnormally small microblasts, the condition is still more serious, since these corpuscles never exist in the normal blood.[10]

Hematology further enables us to differentiate with reasonable precision between chlorosis and pernicious anemia. In the former, though pale in color, the blood coagulates rapidly, while in the latter coagulation takes place slowly and the red corpuscles do not tend to the formation of rouleaux. The red cells in chlorosis (which are smaller and paler than normal and are frequently deformed) vary from 4,000,000 to 2,000,000, rarely falling as low as 1,000,000, while in pernicious anemia in which the average diameter of the red cells is increased, the count rarely rises above 1,000,000, and often below this. Cabot gives 1,000,000 as the average number per cubic millimeter. The white cells are also diminished, varying from 4200 to as low as 500, with lymphocytosis as a prominent feature. Megaloblasts are found in both conditions, but while plentiful in pernicious anemia are rarely noticed in the milder disease, chlorosis. The more megaloblasts in pernicious anemia, the more hopeless the case.

The surgeon would be extremely unfortunate to fail in the recognition of these often obscure lesions, and if possible to correct them before subjecting his patient to the severe ordeal of an operation. In the early recognition of septic processes—chiefly pyogenic—surgery can no longer disregard the value of the blood count, especially the estimation of the leucocytes.

The relative number of leucocytes in a given quantity of blood, or their proportion to the red corpuscles can be readily determined by the use of the Thoma-Zeiss apparatus which, is as well known, consists of two pipettes, one for the red and one for the white, with a well-outlined and peculiarly constructed slide or counting apparatus, and employed with the ordinary one-sixth laboratory objective. The differentiation by the use of the Daland hematocrit is not considered sufficiently exact to be satisfactory in the hands of the majority of hematologists. It is essential in making these differentiations to bear in mind the normal conditions that at the sea level the average number of red cells per cubic millimeter is 5,000,000 in men, and 4,500,000 in women, and 6,000,000 in the young and more vigorous adults, while the white cells average about 7500 per cubic millimeter for each sex.

Certain conditions not considered normal, influence the number of leucocytes since in the latter months of pregnancy they are moderately increased, and after parturition, and during the early weeks of lactation, a leucocytosis may be present, without pathological significance. After hemorrhage the leucocyte count is increased, and in diphtheria, erysipelas, trichiniasis, all extensive forms of endometritis and all acute pyogenic processes, leucocytosis exists except in those cases where the vitality of the individual has been overwhelmed by the severity of the septic process, under which condition the leucocytes no longer respond to the demand for the protection of the tissues, and are not present in the superficial blood in even normal proportions. It is probable that the application of this knowledge is more profitable at present in a study of the various lesions of the abdominal and thoracic organs. We know that in a certain proportion of cases of infection, temperature does not always indicate the increasing gravity of the lesion, while the degree of sepsis can be in great measure determined by the leucocyte count. In impaction of feces, extrauterine pregnancy, floating kidney, gall-stone colic, renal colic, ovarian neuralgia, intussusception, volvulus, internal hernia, twisted pedicle, etc., there is no leucocytosis unless complicated with an acute septic process. In abscess of the liver the leucocyte count ranges from 12,000 to 48,000, while there is a well-marked increase in all the septic pyogenic processes of the lungs and the pleura.

In osteomyelitis the leucocyte count ranges as a rule from 15,000 to 25,000, and at times higher. Since in the early stages of this disease it is at times difficult by subjective symptoms to differentiate between rheumatism or gout, the leucocyte count is invaluable in demonstrating at once the pyogenic process.

In that very rare disease, trichiniasis, the leucocytes register sometimes as high as 30,000, but the special feature is the presence of a large number of eosinophile cells, sometimes as high as 50 per cent., and in rare cases 67 per cent. of the total number of leucocytes being this form of corpuscle. A very considerable number of cases have been reported within the last year in which the diagnosis had been determined by the presence of eosinophiles.

Not only can the presence of the plasmodium malariæ be recognized in the red blood cells, but hematology is already able to determine between the different varieties of the malarial parasite. It has been shown that the tertian organism takes forty-eight hours to develop and undergo sporulation; the quartan seventy-two, while the estivo-autumnal passes through irregular phases, varying from forty-eight hours to several days.

We are enabled to demonstrate also the presence of the spirochete of relapsing fever discovered by Obermeier in 1873. Although the cork-screw or spiral threads are rarely seen unless the blood is examined in the height of the fever paroxysm, diplococcus-shaped bodies believed to be the spores of this organism are found in the periods of remission.

The time allotted has permitted hardly more than a suggestion of the methods of laboratory research, applicable in the daily routine of surgical practice. To me the moral of the lesson is that the *science* and *art* of surgery are inseparable.

9. The average red corpuscle (normal) is seven micro-millimeters in diameter.

10. A normoblast is a nucleated red cell not over 10 mm. in diameter, with a nucleas not more than one-half the diameter of the same.

THE PROGRESS AND TENDENCY OF HYGIENE AND SANITARY SCIENCE IN THE NINETEENTH CENTURY.

ORATION ON STATE MEDICINE BEFORE THE FIFTY-SECOND ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, AT ST. PAUL, MINN., JUNE 4-7, 1901.

GEORGE M. KOBER, M.D.

PROFESSOR OF HYGIENE, GEORGETOWN UNIVERSITY. WASHINGTON, D. C.

Hygiene is a department of medicine whose object is the preservation and promotion of health and deals, therefore, with all the factors likely to influence our physical welfare. It is not an independent science, but rather the application of the teachings of physiology,

chemistry, physics, meteorology, pathology, sociology, epidemiology and bacteriology to the maintenance of the health and life of individuals and communities. The subject is very properly divided into personal and public hygiene. In the former the doctrines are applied to individuals, in the latter to communities and states.

This branch of medicine has received such an impetus within the last few decades that many persons regard it of modern origin; such, however, is not the case, for on turning to early history we almost invariably find that the health of the population has been made a subject of legislation. Hygiene was practiced by the Egyptians, the old Indians and Hebrews, and a study of the habits of the primitive peoples shows that a desire to prevent disease is innate to all men.

The Greeks and Romans paid special attention to the physical culture of their youth; they also paid much attention to the water-supply, and Athens was provided with sewers at an early period of her history.

The teachings of Hippocrates, 400 B. C., doubtless bore many fruits, and whether it is true or not, as stated by Galen, that he ordered, during a pestilence at Athens, aromatic fumigation and large fires in the streets, we have at least his writings on air, water, soil, habitations and occupations and his views of local and seasonal influences on sporadic and epidemic diseases. In Homer's "Odyssey" reference is made to Ulysses purifying his house with burning sulphur, and Aristotle, in his "Politica," shows his sanitary acumen when he says: "The greatest influence upon health is exerted by those things which we most freely and frequently require for our existence, and this is especially true of water and air."

The Romans, amidst their military operations, found time to construct the "Cloaca maxima" about 2400 years ago, which not only served for the removal of refuse, but also helped to drain many of the marshes, and constitutes the principal sewer of modern Rome. Aqueducts were made to cover miles upon miles of the surrounding plains, and their splendid ruins, many of which have been restored and are now used for their original purpose, attest the munificence and abundance with which the first of sanitary requisites was supplied to the Eternal City. It is stated that between 400 B. C. and 180 A. D. about 800 public baths were established, among them the "Thermæ Caracallæ," which alone would accommodate 3000 bathers at one time.

During the reign of the Cæsars attempts were made to drain the Pontine Marshes; sanitary officials and physicians to the poor were appointed and homes for poor girls and orphans were established. In the meantime the true spirit of Christianity asserted itself, and we read of the establishment of hospitals as early as the fourth century; these were speedily followed by infant and orphan asylums and homes for the poor and incurables. During the Middle Ages sanitation received a decided check, ignorant and brutal prejudices appear to have been the ruling spirits and for many reasons it was the most insanitary era in history.

PESTS AND INSANITARY CONDITIONS OF THE MIDDLE AGES.

About this time most of the towns in Europe were built in a compact form, surrounded with walls; the streets were narrow and often winding for defensive purposes, shutting out light and air from the houses. The accumulation of filth was simply frightful. Stables and houses were close neighbors, human filth was thrown on the streets or manure heap. The dead were buried within the churchyards. Sewers and aqueducts having been permitted to fall into disuse, the inhabitants were compelled to resort to wells with polluted subsoil water. All the conditions were favorable for the spread of infectious diseases and in the Fourteenth Century alone the Oriental or bubonic plague, according to Hecker, carried off one-quarter of the population of Europe, or over twenty-five million victims.

Although this disease had been described as early as the third century, B. C., a lamentable state of ignorance is shown, when we remember that the majority of people regarded the plague as the dispensation of God's providence, an evidence of divine wrath, which they hoped to allay by all sorts of self-inflicted punishments, and the passion plays of Oberammergau and elsewhere originated about this time. Others accused the Jews of being the cause, and hundreds were burned at the stake until Pope Urban IV. placed them under his special protection. The Faculty of Paris attributed the epidemic to the conjunction of planets on a certain day in 1345, and the Faculty of Leipzig, with equal gravity, asserted that it was connected with earthquakes, unseen waves of air, inundations, etc. Venice, alone of all Europe took a sensible view of the matter, and for the first time in history, in 1348, appointed three guardians of public health, and the rules adopted later to isolate infected houses and districts for forty days has given rise to the term quarantine—from *quaranta giorni*.

The repeated invasion of the Oriental pest appears to have everywhere compelled some sanitary efforts and an imperial decree in 1426 required the appointment of city physicians throughout Germany, whose duty it was to adopt preventive measures. A city ordinance of Nürnberg in 1562 gives detailed directions as to the quality of bread, beer and wine offered for sale, the cleaning of streets and houses, the disposition of infected clothing and bedding, the fumigation with sulphur and straw of pest-houses, etc.

In 1685 Prussia established a central medical bureau, and appointments of health officers and privy medical counsellors were made, whose duties consisted in advising the men entrusted with the care of the government on matters relating to public health, and some of these titles are still in vogue in Europe. At the beginning of the eighteenth century, Prussia, upon being threatened with an invasion of the bubonic plague from Austria, created the "Collegium Sanitatis," popularly called the "Pest College," which was really the beginning of the present state board of health. In 1762 a sanitary council was established in every Prussian province, for the prevention of disease among man and animals. About the same time sanitary improvements in the way of widening streets for the purpose of supplying more air and light to the habitations, and better methods for the collection and removal of the wastes of human life were introduced, but, broadly speaking, at the close of the seventeenth century the habits of the people in Europe were generally filthy and in striking contrast to those observed among the most untutored savages of the present day.

In Madrid, we are told by Barcome, in his history of epidemics, "that not even a privy existed in 1760. It was customary to throw the ordure out of the windows at night, and it was removed by scavengers the next day. An ordinance having been issued by the king that every householder should build a privy, the people violently opposed it as an arbitrary proceeding, and the physicians remonstrated against it, alleging that the filth

absorbed the unwholesome particles of the air which otherwise would be taken into the human body. His majesty, however, with commendable zeal, persisted, but many of his citizens, in order to keep their food wholesome, erected privies close to their kitchen fireplaces."

With such unsanitary conditions we need scarcely be surprised that the mortality in towns was greater than their birth-rate and that the city population had to be recruited continually from the country. Toward the close of the eighteenth century many sanitary reforms were effected, however, especially in connection with infant and orphan asylums, and the management of schools and prisons. Of special importance is the brilliant discovery, or re-discovery, of vaccination by Jenner in 1796.

PROGRESS OF SANITATION IN THE NINETEENTH CENTURY.

The nineteenth century can boast of many advances in hygiene, particularly since the European invasion of cholera in 1830. The English towns which had been visited by this disease and those fearing similar scourges were willing to profit by their sad experience, and freely instituted sanitary reforms in the establishment of sewers, public water supplies, sanitary homes, etc.

The example of England was followed by all civilized nations, with similar results. The efforts of sanitation, as taught by Dr. Parkes, were demonstrated during the Crimean War and, as beautifuly expressed by Virchow during our Civil War, reached "the highest point in humane efforts ever attained in a great war," and we may proudly add have even been excelled during our late Spanish-American War.

PROGRESS OF SANITATION IN THE UNITED STATES.

While the people of the United States were not slow in adopting and originating sanitary measures of great value, our ideas of personal liberty, guaranteed to us by the Constitution, evidently prevented early legislation in matters of public health, for fear that such legislation might affect the personal habits of the citizen and lessen his freedom of action. Dr. Samuel W. Abbott, in his masterly exposition of "The Past and Present Condition of Public Hygiene and State Medicine in the United States," records, however, the gratifying fact that the early colonists recognized the need of preserving their records, which constitute the foundation stone of public hygiene, by enacting a law in 1639 "that there be records kept of the days of every marriage, birth and death of every person in this jurisdiction."

The importance of vital statistics is not fully appreciated at the present day, and yet, as remarked by Dr. Billings, "when we wish to study the healthfulness of a city, whether it is getting better or worse, or judge correctly the effect of certain sanitary laws, we should not only know the number of deaths, but also the amount and character of the prevalent disease, together with accurate information as to the number of population at different ages." It is a matter of regret, therefore, that even now only ten states, Connecticut, Delaware, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Rhode Island and Vermont, have anything like a satisfactory system of vital statistics.

According to Abbott: "Up to the close of the eighteenth century and for several decades of the nineteenth, almost the only health legislation which was enacted in the different states in the Union consisted in a few laws relating to smallpox, since this pestilence was scarcely ever absent for many years at a time from any city or village, 'till after the general introduction of vaccination."

Dr. Waterhouse, of Cambridge, having secured a supply of vaccin lymph from Dr. Jenner, introduced vaccination in Boston in 1800, and Dr. Seaman in New York in 1801. In the same year President Jefferson received some virus from Dr. Waterhouse and was vaccinated by Dr. Grant, of Georgetown.

The invasion of cholera from Canada in 1832, and the epidemic of 1848-1849 here, as in Europe, aroused public interest in sanitary reforms, and the legislature of Massachusetts in 1849 appointed a commission to make a sanitary survey of the state, and we are told by Dr. Abbott "that this was done none too soon, for in that year the general sanitary condition of the state, as shown by the report of the commission, was deplorable and the death-rate unusually high. Only a few towns had then introduced public water-supplies. Cholera was beginning to appear again and dysentery and other infectious diseases were more destructive than they had been for many years."

HEALTH BOARDS.

New Orleans having lost 8000 victims of cholera in 1832, out of a population of about 55,000, and anxious to maintain a quarantine, secured the enactment of a law in 1855 for the establishment of a state board of health; in 1869 a more comprehensive board was established in Massachusetts, followed in 1870 by California, since which time nearly all of the states and territories—forty-two in number—have followed the example. *Pari passu* and in many instances preceding the establishment of state boards of health, sprung into existence our local boards of health, who adopted measures for the control and restriction of infectious diseases, for the abatement of local nuisances, for the sanitary inspection of the food-supply, schools, public buildings and institutions and tenements; street cleaning and removal of refuse, registration of vital statistics, supervision of burials and of municipal water-supply, sewerage, and sewage disposal, care of bathing establishments, regulation of offensive trades, etc.

EFFECTS OF VOLUNTARY ORGANIZATION ON SANITATION.

In September, 1872, the American Public Health Association was organized; in 1873, the Section on State Medicine of the AMERICAN MEDICAL ASSOCIATION was created; since then the American Climatological Association, the Sanitary Council of the Mississippi Valley, the American Sanitary Association, and the American Health Resort Association have been organized, and numbering, as they do, among their members some of the best minds in the profession, much good has been accomplished by these bodies, and the so-called "sanitary conventions" in molding public opinion and in framing and recommending health laws. There is no doubt, however, that all these organizations were stimulated into existence by the lofty tenets of our Code of Ethics,[1] in which the duties of the profession to the public were prescribed as early as 1847.

1. Article 1, paragraph 1, reads: As good Citizens, it is the duty of physicians to be ever vigilant for the welfare of the community and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene and legal medicine. It is their province to enlighten the public in regard to quarantine regulations, the location, arrangement and dietaries of hospitals, asylums, schools, prisons and similar institutions; in relation to the medical police of towns, as drainage, ventilation, etc., and in regard to measures for the prevention of epidemic and contagious diseases, and when pestilence prevails it is their duty to face the danger and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

Indeed, the AMERICAN MEDICAL ASSOCIATION, according to Dr. N. S. Davis, Sr., gave prominent attention to State Medicine and sanitation from its first meetings. At the second annual meeting, in 1849, standing committees were appointed on forensic medicine and on hygiene and reported annually on these topics and on meteorology, medical topography and epidemic diseases until 1860, when work in Sections was commenced. Dr. A. N. Bell, of New York, delivered the first address on State Medicine in general session of the ASSOCIATION in 1874, followed in 1875 by Dr. N. I. Bowditch, of Boston.[2] In this connection, I may say that there is need of reliable information on the geographical distribution of diseases like goiter, cretinism, etc., and county medical societies would contribute much to the common fund of knowledge by placing on record information of this character.

NATIONAL BOARD OF HEALTH.

The cholera epidemic of 1872 and 1873 resulted in the appointment of a commission by Congress. This, together with the yellow fever epidemic of 1878 in the Southern States, affecting, according to Sternberg, over 74,000 persons, with 16,000 deaths, called attention to the necessity of some central sanitary organization. In March, 1878, Congress created a national board of health, whose duty it was to make investigations into the causes and means of prevention of contagious and infectious diseases, to indicate measures of national importance and to be a center of information for all matters relating to public health. For want of appropriation this important body has ceased to exist, and since 1883 the duties relating to international and interstate quarantine have been discharged by the Surgeon-General of the U. S. Marine-Hospital Service; his bureau, apart from the management of hospitals and stations for the care of sick and disabled seamen of the merchant marine, has also undertaken the collection and dissemination of mortality statistics and sanitary information, scientific investigation into the causes of disease, the physical examination of immigrants under the law, excluding those affected with contagious disease—service in the office of consuls at foreign ports to assure the accuracy of bills of health—and other miscellaneous duties. Since Congress has failed to act upon the President's repeated recommendation and the petition of numerous medical societies for the creation of a national health establishment, there is no good reason why the scope of duties and powers exercised by the Marine-Hospital Service should not be enlarged. Indeed, the last Congress appropriated sufficient money for the erection for a laboratory "for the investigation of infectious and contagious diseases and matters pertaining to the public health," which marks the beginning of a new era in national sanitary legislation.

NATIONAL AND INTERNATIONAL QUARANTINE.

The question of an efficient system of national and international quarantine against Asiatic cholera, yellow fever, smallpox, typhoid fever, bubonic plague, leprosy has engaged the attention of sanitarians for years, especially since it become known that these diseases, particularly cholera, are generally carried along the highways of travel and commerce. Special efforts were made after the completion of the Suez canal and other rapid transit facilities, to guard Europe from the invasion of cholera from India, and since 1892 these efforts have been quite fruitful. At all events with efficient quarantine regulations involving inspection of vessels, passengers and crew, the detention of the sick and disinfection of all others, including personal effects, cargo and vessels, and proper notification, we have been enabled to keep these diseases from our shores, and if other nations do the same, they should be restricted to their original home. General Wyman's plan, as outlined in his address before the Pan-American Medical Congress, contemplates an international system of sanitation; while his proposition refers especially to yellow fever in the Western Hemisphere, it is equally applicable to the home of cholera and the oriental plague.

In the light of the recent researches by Reed and Carroll as to the transmission of yellow fever by means of mosquitoes, our views concerning quarantine and disinfection in this disease may have to be modified, but in the meantime the fight against the mosquitoes will go on; whether this will be effectually accomplished by insecticides and screens, or the more rational method of drainage of the soil, remains to be seen; in either event malarial countries will likewise be benefited.

HAS HUMAN SUFFERING BEEN MITIGATED AND HUMAN LIFE GREATLY PROLONGED BY EFFORTS IN SANITATION?

Our answer is an emphatic "Yes." Professor Finkelnburg, of Bonn, estimates that the average length of human life in the sixteenth century was only between 18 and 20 years; at the close of the eighteenth, it was a little over 30 years, while to-day it is over 40 years; indeed, the span of life since 1880 has been lengthened about six years, as shown by statistics, in Mulhall's "Dictionary of Statistics" (4th edition, London, 1899).

The mortality of London between 1660 and 1678 was 80 per 1000 of inhabitants; from 1728 to 1780, 51 per 1000; from 1801 to 1835 it was still 29, while at the present time it averages betwen 17 and 19 per 1000.

INFLUENCE OF SEWERS AND PUBLIC WATER-SUPPLIES.

Without underestimating the brilliant achievements of Jenner's discovery of vaccination in 1796, which as a preventive measure has saved millions of lives, no two factors have contributed so much to the general result as the improvement of the air we breathe and the water we drink. Indeed, we have ample evidence that, with the introduction of sewers and public water-supplies, the general mortality in numerous cities, during the past forty years, has been reduced fully one-half, the good effects being especially shown by a marked decrease in the number of cases of typhoid fever, diarrheal diseases and consumption. The vital statistics of Great Britain furnish the proof. The mortality of Salisbury within the last thirty years has been reduced from 40 to 16 per 1000; at Dover, from 28 to 14 per 1000; at Rugby, from 24 to 10 per 1000; at Croydon, from 28 to 15 per 1000, and at Matlock, from 18 to 9 per 1000.

The history of every sewered city shows a lessening of the typhoid death-rate subsequent to the construction of the sewers and that the typhoid rate is always higher in sections supplied with privy pits and box privies, than in the houses connected with sewers. In 1895 the speaker pointed out that typhoid prevailed in the city of Washington and suburbs in 1 of 81 houses with privies, and in only 1 in 149 of those connected with sewers, and the health officer of Nottingham has since then presented similar evidence. The only reasonable explanation for this is that sewers carry away the filth that otherwise would contaminate the soil and ground water, but even if there were no wells, these makeshifts are still a source of danger in so far as they favor the

2. Information kindly furnished by Drs. N. S. Davis, Sr., and Geo. H. Simmons, letter of April 18, 1901.

transmission of the infection by means of flies, nor can the possibility be ignored that the germs in leaky or overflowing boxes may reach the upper layer of the soil, and, with pulverized dust, gain access to the system. This conclusion, and the agency of flies in carrying the germs from box privies and other receptacles from typhoid stools to the food-supply, was enunciated in my report in 1895 and appears to have found ample support in the experience of the late Spanish-American War.

INFLUENCE OF IMPROVED WATER-SUPPLIES.

According to Dr. Abbott, the number of towns in the United States before 1800 having a public water-supply was only 16, supplying about 2.8 per cent. of the existing population; in 1850 there were only 83 public water-works, supplying about 10.6 per cent. of the census population; in 1897 the total number was 3196, supplying about 41.6 per cent. of the population.

A summary of the evidence on this subject reveals the significant fact that cities, both at home and abroad, in which there has been the most marked decrease in typhoid fever death-rate, are those in which a pure supply has been substituted for a pre-existing contaminated one. Thus, for example, the typhoid fever death-rate in Boston in 1846-1849 was still 17.4 per 10,000; in 1890-1892 it had fallen to 3.2 per 10,000, the city having in the meantime expended $25,000,000 on its water-supply. The typhoid fever death-rate in Chicago from 1890 to 1892 averaged 12.5 per 10,000. After improving the water-supply it fell with every step in improvement until last year it was only 1.9 per 10,000, a total reduction of 84.8 during the decade. The rate from this disease in Lawrence, Mass., for five years prior to 1893, was 12.7 per 10,000. After the establishment of sand filters, in September, 1893, the rate fell during the first twelve months to 5.2 per 10,000.

Munich was notorious for its excessive typhoid fever death-rate, it being 29 per 10,000 in 1856. With the introduction of a pure water-supply and improved sewer system it has fallen to less than 2 per 10,000. The experience of London, Berlin, Vienna, Albany and a host of other cities has been precisely the same.[3]

SEWAGE DISPOSAL AND RIVER POLLUTION.

When we remember that in 1896, 41 per cent. of our population lived in towns having public water-supplies, and only 28.7 per cent. in sewered towns, we fear that the municipal authorities have failed to recognize the necessity that a system of public sewerage must go hand in hand with the public water-supply, the neglect of which simply compels recourse to the various makeshifts for the collection and removal of excreta, and leads to soil pollution and all the other evils already referred to.

In view of the fact that self-purification of rivers is a slow and uncertain process, and that streams once polluted with excrementitious matter can not be considered a safe water-supply, it is high time for civilized communities to take steps toward removing the danger to be found in rivers, which are the sewers and at the same time the sources of public water-supplies.

We know, from statistics collected by the Marine-Hospital Service, that the towns and cities located on the banks of the Ohio, Potomac, Mississippi, Merrimac, Connecticut, Missouri, the Red, the Columbia and Wabash rivers show a marked prevalence of typhoid fever, confirming what has elsewhere been proved, that this disease, as also cholera, dysentery and diarrheal diseases can be carried from one town or city to another by means of water-courses. There were probably no fewer than 35,000 deaths caused by typhoid fever alone throughout the United States last year and, based upon an estimated mortality of 10 per cent., it is within reason to assume a yearly prevalence of 350,000 cases of this disease. The average duration of a case of typhoid fever is not less than thirty days. If we calculate that an average of $1 a day is expended for care, treatment and loss of work, and that the value of a human life is $5000, we have a total loss in the United States of $185,500,000 per annum, from one of the so-called preventable diseases. Reduce the prevalence of this single disease one-half, which has been accomplished in England, and the oft-recurring question: "How is it our fathers got along without these so-called modern improvements?" will be satisfactorily answered from an economic point of view.

One of the most pressing needs is an investigation into the pollution of water-supplies when such pollution affects or threatens to affect the sanitary condition of the people of more than one state, because the individual states are powerless to protect themselves against the misdeeds of their neighbors. Mr. Barthold's bill for the appointment of a river pollution commission was defeated; yet that same Congress appropriated $40,000 for the extermination of the gipsy moth. England enjoyed the benefit of such a commission as early as 1855, and, in order to prevent, remedy and remove the danger of polluted water-supplies, adopted a comprehensive system for the disposal of sewage and water filtration, the fruits of which have already been referred to.

No community or individual has a right to pollute streams used for public water-supplies any more than a man has to contaminate his neighbor's well. This principle is very well appreciated by some of the nations in Europe. Thus the inhabitants of a town in Belgium suffered from the effects of a river polluted by the French and the French Government not only compelled the offending town to dispose of its sewage by irrigation, but also granted a subsidy for this purpose.

In the interest of public health it is to be hoped that every state in the Union will take steps toward the prevention of river pollution, except when towns are located close to the sea, and no lower towns are obliged to use the water for drinking purposes.

In 1878 the British Government appointed a committee to inquire into the several methods of sewage disposal and concluded that it can be best and most cheaply disposed of by the process of land irrigation for agricultural purposes, but as this is not always practicable other modes of dealing with sewage have been proposed.

It is a gratifying fact that within the past ten or twelve years over 100 communities in the United States have established plants for the disposal of sewage. The first attempt was made in 1872 at the state insane asylum, Augusta, Me., since which time seventy-eight plants for the disposal by irrigation, and fifteen by chemical treatment have been established and over forty more projected.

PURE FOOD AND DRUG LEGISLATION.

The first movement toward securing comprehensive legislation against the adulteration of foods and drugs

3. In 25 cities using unfiltered water the average typhoid death-rate is still 7.7 per 10,000; in 5 American cities supplied with water filtered by the American process, the rate is 5.5, against a rate of 1.1 per 10,000 in cities supplied with water filtered by the natural or English method. The average rate of 5 cities in Europe supplied with mountain springs or deep wells from unpolluted sources is only 0.7 per 10,000.

in this country was made in 1879. This is all the more surprising because Dr. Mann, in his "Medical Sketches of 1812," remarks that "the bread on the Niagara was made of damaged flour, such as was either not nutritious or absolutely deleterious." It was believed also that the flour contained in some instances an earthy substance, and that this adulterating substance was plaster-of-paris. Again, during the Civil War, as early as the winter of 1861-62, an extract of coffee furnished the troops in the vicinity of Alexandria produced nausea and vomiting, and subsequently a government contractor, for having practiced food adulteration, was sentenced to a protracted imprisonment.

Instances, therefore, were not wanting pointing to the necessity of such laws; nevertheless, it was not until 1881 that three states, New Jersey, New York and Michigan passed laws to prevent the adulteration of food and drugs. The law in New York commenced in the summer of 1882. At the close of the year 286 samples of food and drugs had been submitted to the public analyst for examination, of which 194 had been reported on. Of 119 samples of food, 50 were found adulterated; while of 75 samples of drugs, 32 were adulterated.

Since 1883 quite a number of states have enacted similar laws, but I regret to say that in spite of the absolute necessity for national legislation, which has been agitated ever since 1892, so far every bill presented to Congress has failed to become a law, and food adulterated in one state can be taken to another and sold. It would lead me entirely too far even to touch upon all the frauds which are daily perpetrated. Some adulterations are harmful, others are not. I will simply refer to a very universal article of food, viz., milk. New York City obtains its milk-supply from five states, and amounted in 1896 to nearly 729,000 quarts a day. Analysis of the milk sold some years ago showed an average dilution with 33 per cent. of water. The state inspector found 12 per cent. water added and 20 per cent. of cream removed, the fraud amounting to over $10,000 a day. The results in St. Louis, Chicago, and elsewhere were similar, and indicated the desirability of stringent laws to protect the pocket of the consumer, but when we remember the frightful infantile mortality, and the fact that the speaker has recently presented his conclusions, based upon 195 epidemics of typhoid fever, 99 of scarlet fever and 36 of diphtheria and that 52 of these outbreaks occurred in this country since 1882, we see at once that the milk traffic should be under strict sanitary control.[4]

LAWS REGULATING THE SALE OF DRUGS AND POISONS.

Forty-two states and territories have enacted laws to regulate the sale of poisons, but a careful study shows that they should be amended, and greater restriction placed on the sale of poisons generally. A recent investigation by a committee of the Medical and Surgical Society into the extent of the opium and drug habit in the District of Columbia developed some interesting facts, and led to the conclusion that one class of subjects have developed the opium habit by the use of the milder preparation of opium and some of the various proprietary or secret remedies commonly employed as domestic remedies, such as paregoric, McMunn's elixir, chlorodyne, blackdrop, soothing syrup, diarrhea mixtures, pain-killers, etc. Those of another class have evidently acquired the habit by the constant use of prescriptions containing opium, or its preparations, for the relief of pain, the individuals being at first quite unconscious of the enslaving nature of the drug. Still another class of persons belong to the moral degenerates of fast men and women who have acquired the habit by contact with opium habitues, including opium smokers, and through solicitation, invitation and persuasion have fallen victims to the vice. Since the opium habit is often established by the unauthorized and indiscriminate renewal of prescriptions containing opiates, the New York legislature very wisely enacted, in 1886, a law that no pharmacist shall refill more than once prescriptions containing opium or morphine, or preparations of either, in which the dose of opium shall exceed ¼ grain, or morphine 1/20 grain, except with the verbal or written order of a physician.

It is clearly the duty of the state to close opium dens and restrict the sale of poisons, and in regard to the sale of patent and proprietary medicines containing poisonous drugs, the contents should be expressed on the label and the word poison added.

PATENT AND PROPRIETARY MEDICINES.

By the term patent medicine, as properly employed in this country, England and Europe generally, it must be understood that the composition is known and can be seen at the patent office. The proprietary medicine is a secret preparation protected by a trade mark in this country, and hence preferred by the owner, but both are vaguely termed by the public patent medicines. Up to Dec. 10, 1900, the United States patent office had issued patents on the following:[5] disinfectants, 321; extracts, 250; hair dyes and tonics, 48; insecticides, 180; internal remedies, 376; plasters, 56; topical remedies, 371; veterinary, 78. Trade marks:[6] drugs and chemicals, 319; medical compounds, 5974, and increasing at the rate of about 250 a year.

The proprietary medicines are subject to the control of the state authorities, and if containing alcohol in sufficient quantity to be intoxicants are subject to internal revenue laws; but so far as my knowledge extends, little or nothing has been done in this country and in England to control the sale of secret remedies. Dr. G. Danford Thomas, Coroner of London and Middlesex, before the International Congress of Hygiene, in 1891, very justly urged that all proprietary medicines should be under the patent laws, because the composition is at least disclosed; he would abolish licenses to sell them and confine the sale to chemists and druggists only. In these matters we could certainly profit by the example of the Japanese, Italian, French and German laws. In the interest of public health the profession should demand adequate legislation; as it is now, hundreds of these proprietary preparations, the composition of which need not even be disclosed to the patent office, are advertised in medical journals.

INDUSTRIAL HYGIENE.

The relations of occupation to health and life were studied as early as 1700 by Ramazzini, an Italian physician, and since then numerous monographs have appeared. We know to-day that persons habitually engaged in hard work, especially in factories and indoors, present a higher mortality than persons more favorably situated, and that the character of occupations influ-

4. The results achieved by the health officers of every large city, notably by Reynolds, of Chicago, Wende, of Buffalo, and Woodward, of Washington, in the reduction of infantile mortality, amounting in some instances to over 50 per cent., show the advantages of pure food legislation.

5. Information kindly furnished by Dr. J. B. Littlewood, of the Patent Office.

6. Information collected from files of the U. S. Patent Office, by the author.

ences, to a great extent, not only the average expectation of life, but also the prevalence of certain diseases. We know, for example, that tuberculosis is much more frequent among persons engaged in dust-inhaling occupations, and that the sharp angular particles of iron and stone dust are more liable to produce lesions of the respiratory mucosa than coal, flour, grain and tobacco dust. We know, too, that certain establishments, like slaughter-houses, glue, soap and candle factories, chemical factories, etc., are more or less productive of noxious and offensive gases, and that workers in lead, mercury, arsenic, phosphorus, poisonous dyes, etc., suffer especially from the injurious effects, and that other occupations, such as mining, railroading and contact with moving machinery, involve special danger to life and limb.

For all these reasons the laboring classes need special protection, and in order to render this efficient, it must be provided for by the enactment and enforcement of suitable laws. In 1864, 1867 and 1870 England enacted the so-called factory laws. According to Miss S. S. Whittlelsey's "Essay on Massachusetts Labor Legislation," child labor, here as in England, was the first aspect to receive attention in legislation as early as 1836. The first law as regards safety and sanitation was enacted in that state in 1877, since which time, from information kindly furnished by the Hon. Carroll D. Wright, of the U. S. Department of Labor, thirty-two states have enacted similar laws, including legislation requiring seats to be furnished saleswomen in stores and shops. Indeed, in some of the states the latter requirement is the only sanitary regulation. As a result of these laws, the majority of which were enacted during the last decade, commendable progress has been made in the way of ventilation, heating, lighting, removal of dust and injurious gases, means of escape in case of fire and prevention of injuries by moving machinery.

It is quite true there are other factors which affect the health and longevity of wage-earners adversely. So, for instance, unsanitary dwellings, faulty nutrition—the results of badly prepared food and cold lunches—can not fail to lower the power of resistance to disease, especially when the individual, in consequence of these very causes, has also become a victim of the alcohol habit.

SANITARY DWELLINGS FOR WAGE-EARNERS.

No field affords better opportunity for philanthropic work than the erection of sanitary homes for wage-earners at reasonable rentals, the encouragement of cookery schools, the establishment of sanitary lodgings, model eating-houses and other betterments of industrial conditions.

The vital statistics of London show that the mortality in the improved dwellings for wage-earners is far below the general mortality of the city, the difference being specially marked in the infantile mortality; the general average during the five years ending December, 1890, was 153 per 1000, while in the "George Peabody" and the "Metropolitan dwellings" it was only 136 and 121 respectively.[7]

RURAL HYGIENE.

When we consider the fact that over 70 per cent. of our population reside in rural districts, that the "bone and sinew" of these are engaged in agricultural pursuits, and that they do not enjoy the benefits of enforced sanitation by local health boards, we see at once the desirability of the family physician extending useful suggestions on healthful building sites and homes, disposal of house wastes, the importance of a pure water-supply, wholesome and properly cooked food, etc. As it is now, the diet is faulty, especially the hot biscuits, greasy fried dishes, while wells and privies are often dangerous neighbors. The undue prevalence of typhoid fever in rural districts could be materially checked by disinfecting the stools with three times the volume of boiling water and the adoption of the earth closet system. This is all the more important since infection is often spread through the milk-supply, and many of our urban population contract disease in the country during the summer months. While prompt disinfection of the excreta is the only rational method, we should also make an effort to get rid of the flies by prompt disposal of the horse manure in which they breed, the abandonment of open privies and surface pollution, removal of garbage and other fly-breeding matter.

SANITATION OF PRISONS.

Most commendable progress has been made in the construction and management of modern prisons. The mortality at the close of the last century, among prisoners in some of the French prisons, was 250 per 1000; between 1840 and 1849 it was still 80.2 per 1000, at St. Gallen, while to-day it is less than 30 per 1000. Tuberculosis, typhoid fever, diarrhea, croupous pneumonia and mental disorders are the most prevalent diseases, but much will be done in future to reduce the excessive mortality by improved lighting, heating, ventilation, good food, bathing facilities, etc.

In some of the damp, dark and gloomy prisons of Germany over 50 per cent. of all the deaths are from consumption. In the Mill-Bank prison of London, from 1825 to 1842, were 175 deaths, of which no less than 75 were due to tuberculosis. Besides, 90 prisoners were set free on account of being hopelessly afflicted with pulmonary tuberculosis. In the Illinois State Prison, at Joliet, during the year 1895, 39 deaths were reported from consumption; in 1900 only 8 occurred. This decrease appears to be due directly to segregation of tuberculous subjects.

HOSPITALS, SANITARIA AND DISPENSARIES.

Perhaps no country in the world can boast of better hospital facilities than our own. Indeed, many of our institutions are perfect in sanitary architecture and equipment. There are in the United States no less than 1776 hospitals, including 35 special hospitals for consumptives; 308 sanitaria; 213 dispensaries, and over 8000 mineral springs, of which 727 are health resorts. Un-

7. At a recent meeting of the American Social Science Association, held in Washington, April 18, 1901, Mr. J. H. Patterson, Dayton, Ohio, read a paper on factory sanitation and described a large manufacturing plant of which he is the head, and their close adherence to the principles of hygiene and the uplifting of mankind. The interior of the factory is painted in cheerful colors, extra windows were made to give light, forced ventilation to afford plenty of fresh air, and all dust and acid fumes are carried away by exhaust fans. Bath-rooms and well-furnished toilet-rooms are on all the floors. All seats have backs. Clean aprons are furnished by the company, and a dining-room where hot meals are served and a course in domestic economy is conducted. The grounds around the factory, and the houses of the employees, are healthful and attractive. "We have demonstrated," said Mr. Patterson, "that this system pays the employee, the manufacturer and the buyer: in the health of one, profit of the second, and the improved quality of the product purchased by the third." Bulletin No. 31, Department of Labor, November, 1900, contains an article on betterment of industrial conditions, showing what has elsewhere been accomplished, every effort being in the right direction, except that free medical attendance is being furnished by certain companies, involving a contract system with physicians, which ought never to gain a foothold on American soil, because it has proved a bane to the profession elsewhere.

fortunately the liberality with which medical charities have been supplied has given rise to shameful abuses, and persons who would shrink from seeking charity in any other form have abused the privileges offered by hospitals and dispensaries.

Correction of Abuses.—In 1896, speaking of the city of Washington, no fewer than 21 per cent. of the population received free medical treatment; the medical association in 1897 adopted certain rules compelling the attending staff of hospitals and dispensaries to require evidence of dependency; as a result of this system there has been a gradual but positive decrease in the number of charity patients, amounting to over 9000 last year. It is the simplest, most just and effective remedy for the correction of this evil.

SCHOOL HYGIENE.

During the year ending June 30, 1900, there were 15,341,220 children enrolled in the common schools of our country. When we consider that the mental and physical vigor of a nation depends largely on the environments of childhood and youth, it seems strange that up to within forty years little or no attention should have been paid to the hygiene of schools. The occurrence of so-called school diseases is not surprising when we reflect that children, on beginning school, enter upon a new life and environment. Up to this time they have been allowed to run and play in the open air, exercise the body and senses, without restraint, but now without a period of transition they are obliged to remain for several hours a day in close and sometimes unsanitary school rooms, taxing their minds and straining their eyes for near objects. Experience teaches and statistics confirm the conclusion, that quite a number of children suffer from certain physical defects and diseases, which because rarely observed before the school period, may be justly attributed to school environments. Among the most common of these affections are myopia, lateral curvature of the spine, dyspepsia, anemia, muscular debility, headache and nose-bleed, nervous affections and tuberculosis. Ware, of our own country, as early as 1812 called attention to the fact that myopia was most frequently developed in the school room, and during the past forty years we have been enlightened as to the cause of this and other defects, and many excellent monographs have been written on the construction of school buildings, arrangement of recitation-rooms, as regards light, ventilation, adjustable seats and desks, proper type for text-books and more rational methods of mental and physical training. This, together with a commendable zeal on the part of the authorities to correct existing evils, has resulted in many reforms, the fruits of which are already apparent in a decrease of the diseases referred to.

Medical Inspection.—I can not enter into details concerning the prevention of the spread of infectious diseases among school children, but desire to emphasize the necessity of medical inspectors, whose duty it should be to visit the schools, examine pupils, and give such directions as will reduce the dangers of spreading contagious diseases to a minimum; they should also make sanitary inspection of the buildings and present such recommendations as are necessary in the interest of the health of both the pupils and teachers, and as the physicians were perhaps the first to recognize the fact that "the system of education should be made to fit the child, not the child the system," the teachers may derive much aid from such consultations; among the cities that have inaugurated such inspections since 1894 are Boston, New York, Brooklyn, Chicago, Milwaukee, Louisville, St. Louis, Philadelphia, Jersey City, Brookline, Mass., Buffalo, Minneapolis and Salt Lake City, and they have proved of inestimable value.

SMALLPOX AND COMPULSORY VACCINATION.

In this connection, attention is invited to the undue prevalence of smallpox in the United States; the total number of cases reported to the U. S. Marine-Hospital Service during the past fall and winter, up to March 29, was 11,964, as compared with 7279 cases for the corresponding period of the preceding year, and it is doubtless due to neglect in vaccination. Dr. Abbott estimates the vaccinated portion of the inhabitants of the United States at not far from 90 per cent., and the revaccinated portion at probably 50 per cent. With the introduction of glycerinated animal lymph every vestige of prejudice against vaccination should cease, and compulsory laws should be enacted in every state, so that smallpox here, as in the German army, may become practically unknown. While quite a number of states have enacted laws requiring that unvaccinated children shall not be admitted to the public schools, it is believed that these laws are not rigidly enforced.

VENEREAL DISEASES.

A careful perusal of Dr. Prince A. Morrow's article on the "Prophylaxis of Venereal Diseases" (*Phila. Med. Jour.*, April 6, 1901) should stimulate our efforts in the prevention of diseases, which affect not only the offender, but innocent wives, the offspring and not infrequently even the medical attendant. According to Fournier, one-seventh of the population of Paris is syphilitic, and Morrow, from statistics gathered in New York, believes it is quite possible that Fournier's figures, with some modification, may apply to New York. Neisser holds that gonorrhea is, with the exception of perhaps measles, the most widespread of all diseases. Other German authorities have computed that fully three-quarters of the adult male population and one-sixth or more of the adult females have contracted gonorrhea; that 80 per cent. of all deaths from disease of the uterus and its adnexes are of gonorrheal origin, while blenorrhea neonatorum contributes a contingent to our asylums for the blind estimated at from 10 to 20 per cent.—from 40 to 60 per cent. before the Credé method was instituted—not to mention the destructive effects on the procreative functions. Dr. S. M. Burnett, of Georgetown University, believes that 15,000 of the 50,000 blind persons in the United States lost their sight from this cause, which according to his calculation involves a financial loss to the commonwealth of seven and one-half millions annually.

The measures which have been proposed for the control of the social evil and the prevention of its consequences are numerous enough, but not so easy of practical application. On the whole I believe the remedy lies in public education, and the task as usual falls on the medical profession, especially the trusted family physician. Public lecturers on the purity of man commit a serious mistake, however, when they picture the consequences of the social evil, without offering a suitable remedy. We should make a strong plea in favor of continence, and tell our young men that while the sexual passion is very strong it can be accelerated or delayed, excited or lowered by the influence of the will. We should assure them that by the cultivation of pure thought, removal of temptation, normal, mental and vigorous physical exercise, continence may not only

become possible, but easy. And we can hardly go astray if we follow Dr. Parkes in advising a pure young man to make his home, after the age of 21, and thus secure himself both from the temptations and expenses of bachelorhood.

THE MANAGEMENT AND CONTROL OF INFECTIOUS DISEASES.

It is the field of infectious diseases where preventive medicine has and doubtless will continue to achieve its greatest triumphs, and there is ample room, when we consider that during the census year of 1890 there were not less than 102,199 deaths from consumption, 74,496 from pneumonia, 74,711 from diarrheal diseases, 41,677 from diphtheria, and 25,058 from typhoid fever. In spite of centuries of groping after facts, we knew nothing of the real nature of infectious diseases until the middle of the present century, and even twenty-five years ago the text-books still discussed the subject of miasma and contagia, whose nature had never been demonstrated to our senses. With improved microscopic lenses and the development of bacteriology, more especially the discovery of the anthrax bacillus by Davaine, Pollender and Brauell (1849-1855), scientific medicine had its birth, and to-day we know that such diseases as tuberculosis, glanders, leprosy, cholera, erysipelas, wound and puerperal infections, gonorrhea, pneumonia, cerebrospinal meningitis, typhoid fever, diphtheria, malaria, influenza, dysentery, bubonic plague, and possibly carcinoma are caused by living organisms, capable of reproduction within and without the body, and this is a strong argument in favor of the microbic nature of other infectious diseases, in which the specific organism has not yet been isolated.

The eradication of preventable diseases is the highest aim of scientific medicine to-day. The public should be made familiar with the nature and causes of infectious diseases, and be taught that many are a source of danger, against which it is entitled to be warned by proper notification through the health officer. This notification should be made compulsory in cholera, yellow fever, smallpox, chicken-pox, typhus and typhoid fever, diphtheria and membranous croup, scarlet fever, tuberculosis, cerebrospinal meningitis, leprosy, glanders, bubonic plague, whooping-cough and measles. And let me say that a prompt and correct diagnosis is the first and most important step in preventive measures. The health department should have competent medical inspectors and a clinical laboratory for the verification of the diagnosis, and have the power in certain of these diseases to display warning signs, enforce isolation and disinfection, and to take such other steps in the way of immunizing agents as may be deemed necessary to limit their spread.

Isolation, to be effective, should extend to all persons who have come in intimate contact with the patient, but this is rarely enforced except in smallpox, in the case of the attending physician, and the wage-earners of the family, but it is clearly their duty to take special precautions in the way of clothing and personal disinfection. Matters of this kind ought never to be left to the discretion of the family, nor the attending physicians, for even members of the profession often entertain widely opposing opinions on the subject of quarantine and disinfection, but the principles which ought to be carried out, apart from being a matter of conscience, should be accepted in a practical sense and embodied in effective laws.

Disinfection.—Scientific disinfection had its inception with the labors of Koch and Sternberg some twenty years ago. Although, as we have seen, certain physical and chemical agents were used empirically for ages, now we know from laboratory experiments that they are effective, because they destroy the vitality of the germs. We also know that, in most of the contagious diseases, the infective matter is given off by the patient chiefly through the secretions and excretions, and it is evident that disinfection to be of value must be directed to these and all the media with which the patient has come in contact.

"IF CERTAIN DISEASES ARE PREVENTABLE, WHY ARE THEY NOT PREVENTED?"

My answer is, that while every scientific physician familiar with biologic research knows full well that if the methods of prevention recommended by sanitarians, including the prompt disinfection of the dejecta of every typhoid fever patient, the expectoration and excretions of diphtheria and tuberculosis patients, for example, were adopted, these diseases would be reduced to a minimum and probably eradicated in the course of a few years. The facts are, these recommendations have not been generally adopted, because the knowledge gained by experimental medicine is not sufficiently diffused. Nor are we responsible for the fact that so many of our states still permit every charlatan to practice one of the most difficult and responsible of all professions without a uniform and rigid system of examination. However, we owe it to ourselves and to humanity to take positive steps in behalf of higher medical education and laws regulating the practice of medicine. So long as we permit the existence of irregular and incompetent practitioners, so long will the public be deceived, and so long as we tolerate the exponents of so-called "Christian Science," osteopathy, and other quacks, infectious diseases will be spread as the result of ignorance and neglect. A strong organization, such as is proposed for the AMERICAN MEDICAL ASSOCIATION and the various state medical societies will speedily accomplish this and other reforms.

[During the year 1900 there were 119 regular medical schools in this country, with 1079 female and 21,673 male students; of these 22,752 students, 2327, or about 10 per cent., had degrees of A.B. or B.L. Number of graduates last year, 4720. The homeopathic schools had 1584 male and 325 female students, and the eclectics 500 male and 52 female students. The number of registered physicians in the United States in 1900 shows an average for the whole of about 1 to 636 inhabitants. In 31 states and territories, according to D. McIntyre, an examination is required, in 9 certain diplomas are accepted, all others must be examined; in 5 only a diploma is required, and in 5 the laws practically impose no restriction. In 1900 there were 150 national and state medical societies, 1097 county and local medical societies, and 282 medical journals, of which 28 were exclusively devoted to hygiene and public health.]

FORECAST OF THE RESULT OF THE CENSUS WORK UPON THE MORTALITY STATISTICS.

Notwithstanding these and other disadvantages in the way of defective sanitary legislation, the American medical profession has reason to be proud of its work in the century's progress of hygiene and preventive medicine. It may be truly said that every hospital or other medical charity owes its foundation and success to the activities of the medical profession. Nay, every law inscribed on the statute books, in the interest of public health in this and other countries is the work of our noble profession. Acting upon the lofty principle that the education and betterment of the people in sanitation is not less humane than the healing of the

sick, the American medical profession has filled the measures of its philanthrophy by advocating laws to "regulate the health and physical well-being of communities," and thereby lessen its own income, but the results obtained during the last ten years are sufficient recompense. By the courtesy of Mr. Wm. A. King, Chief Statiscian of the U. S. Census Bureau, I am enabled to give you a forecast of the result of the work upon the mortality statistics at the close of the century:

The mortality returns for the twelfth census, which relate to the year beginning June 1, 1899, and ending May 31, 1900, have not yet been tabulated in full, but sufficient progress has been made to permit a comparison of the preliminary results with the figures for 1890 for a portion of the country.

Considering these results for these states in which the returns were secured from registration records in both 1890 and 1900, there appears to have been an absolute decrease in the general death-rate of about 1.5 per 1000 of population. This decrease seems to be most marked in the rates due to scarlet fever, whooping-cough, diphtheria and croup (combined), typhoid fever, malarial fever, consumption, diarrheal diseases, and diseases of the nervous system, the decrease in the mortality from diphtheria and croup amounting to more than 50 per cent. On the other hand, the rates due to carcinoma and tumor (combined), Bright's disease, heart disease and dropsy (combined), and pneumonia are apparently greater than in 1890, the increase being most marked in case of Bright's disease, carcinoma and tumor, and pneumonia.

The death-rate by age periods in the registration states has not yet been computed as the population figures are not yet available, but the effect of the decrease in the rates due to the causes specified is shown by a decrease in the proportion of deaths occurring at each period up to 30 years.

The results in the decreased rate of diphtheria, croup, scarlet fever, typhoid fever, whooping-cough, consumption, malarial fever and diarrheal diseases are the direct outcome of preventive medicine and are as gratifying as they are striking. We note with regret the increased rate in Bright's disease, heart disease, dropsy and pneumonia, and may well pause to inquire whether our ever-increasing "National Drink Bill," averaging 17.68 gallons per capita, may not be a factor in the development of these diseases, especially since there is reason to believe that the habitual and immoderate use of alcohol, apart from increasing the connective tissue and causing cirrhosis, also produces fatty degeneration, especially of the heart, liver and arterial coats, probably because it promotes the conversion of albuminoids into fats.

Without wishing to under-rate the brilliant achievements in surgery of the brain, stomach, intestines, liver, gall-bladder and other abdominal organs, and even wounds of the human heart which have been successfully sutured in four of the nine cases reported, what after all are the ultimate benefits compared with the results obtained by improved methods in sanitation?

Since our knowledge of the nature of infectious diseases has been more and more defined, scientific methods for their prevention have been applied. We have learned, too, that in addition to the germ there must be a suitable soil for its proliferation and that sanitation will not only destroy the environments for its development without the body, but also place the system in the best possible condition to resist its toxic action.

The application of this knowledge has saved millions of lives besides an incalculable amount of human suffering and distress, not to mention the economic aspect of the question. When we remember all this and the fact that Jenner's discovery at the close of the last century, of a fundamental and practical method of producing artificial immunity, has been far eclipsed in the last twenty years, and that we possess to-day not only curative but also protective sera for diphtheria, erysipelas, tetanus, plague and possibly cholera, tuberculosis, typhoid fever, pneumonia, and a number of other immunizing agents for diseases of man and lower animals, we have reason to believe that the solution of the problem of immunity is only a question of time, and we may indeed expect great possibilities in our battle against infectious diseases.

To the solution of this problem, the labors of Salmon and Smith, Sternberg, Welch, Osler, Councilman, Reed and other Americans engaged in experimental medicine have contributed their full share. Progress has crowned our past, we will not retrograde. Let our conduct raise no blush on the cheek of posterity. Let us hand in hand with heart and mind join in promoting the welfare of American medicine, until she has reached the proudest pinnacle in the world of science, until she has become the fountain-head of knowledge for the benefit of mankind. Then when at last we are called upon to pass through the portals beyond, Minerva Medica, in her sweeping robes of state, will proudly but reverently present us to the Supreme Healer of the Universe as types of the true physician.[8]

Symptoms of an Affection of the Pancreas.—Scherschewski calls attention to the fact that the pancreas lies directly above the aorta and its plexus and receives its blood-supply from the same vessels as the liver and spleen. It is therefore probable that an affection of the spleen is usually complicated by a sympathetic lesion in the pancreas. Slight enlargement of the pancreas compresses the aortic plexus but as the enlargement progresses, the lumen of the aorta is also compressed and below this point the aortic sound is transformed into a murmur. A constant murmur, therefore, in the aorta indicates enlargement of the pancreas. Changes in the size of the spleen in the course of a few days, suggest an affection of the pancreas in the absence of malaria. Compression of the aortic plexus causes girdle pains and typical pains in the bladder and ureter. They are inconstant, resemble gall-stone colic, are more or less periodical, appear soon after eating and last one or two hours. They frequently appear at 1 to 2 a. m. They are not severe but are accompanied by intense nausea and weakness. They are never accompanied by defecation and have no connection with the amount or quality of the food. Another symptom is a pulsation in the stomach region, with cardiac distress and palpitations, independent of the condition of the stomach or ingestion of food. In most of his fourteen cases there was a history of malaria six or seven years previously. Malarial cachexia is probably due to an affection of the pancreas in many cases. In four patients the influence of a trauma was evident. He administered pancreatin in doses of .3 gm. after meals, with or without .01 ext. belladonnæ, with plastic clay on the stomach region, sometimes alternating with ice. Devoto has recently announced that any factors, traumatic or otherwise, which diminish the resistance of the organ or allow the penetration of the bacterium coli into the pancreatic duct, favor the evolution of acute pancreatitis. It may be accompanied by effusion, hemorrhagic or not, or by suppuration.

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8. In the preparation of this address, I have been greatly aided by the Library of the Surgeon-General's Office, the historical monographs on hygiene, by Professor Finkelnburg, of Bonn, now deceased, and Dr. S. W. Abbott, of our own country. I am also greatly indebted to Dr. W. T. Harris, the Commissioner of Education, and Dr. A. E. Miller of his Bureau. Other acknowledgments have been made in the text and are gratefully renewed.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

61 Market Street : : Chicago, Ill.

Cable Address: "Medic, Chicago"

Subscription price: Five dollars per annum in advance

SATURDAY, JUNE 8, 1901.

THE DISINTEGRATION OF THE PERSONALITY.

Cases of so-called double consciousness or multiple personality are rather numerous in medical and psychologic literature and are generally of a common type—the individual possesses or is subject to two conditions of consciousness, in either or both of which he or she is unconscious or amnesic of his doings in the other. Such conditions are not at all infrequent in epileptics and often afford opportunities for interesting studies and speculations. It is not often, however, that we have a well reported observation of multiple personalties, co-existing as it were simultaneously in the subject from their first appearance to their final exit from the scene. What appears to be such a case forms the subject of a recent article by Dr. Morton Prince,[1] whose reputation as a physician and neurologist gives it the credibility that might otherwise be questioned.

The subject was a neurasthenic young woman, in whom a second state of consciousness could be induced by hypnotism. Upon both these was superimposed a third state, which became continuous. This third personality, which Dr. Prince calls B. III., and identifies with the subliminal consciousness, was co-existent with and independent of the other personality, B. I., knew all her thoughts, while with B. I. the reverse was true. B. III. was morally deficient and lively in disposition and hated B. I., who was hyperconscientious and depressed, and delighted in annoying and playing tricks upon her. Still later a fourth personality was superinduced upon both of these, which Dr. Prince calls B. IV. This was, in some respects, like B. I., but different in several important particulars, unimpressionable, quick tempered, not a musician, etc. By a course of reasoning founded upon close observation and the complete history of the case, Prince concluded that none of these four personalities fully represented the original Miss B., who, owing to a severe mental shock, became disintegrated and "as a complete psychical composition, departed this life in 1893. B. I. and B. IV. are each different disintegrated parts of the complete Miss B. In these disintegrations of the primary consciousness, a certain portion split itself off and became dormant. The remainder persisted as a modified personality, B. I." B. II. was simply B. I. or B. IV. hypnotized, while B. III. is the independent subliminal self. The conclusions which Prince considers justified by this case, are: 1. The subliminal self may become developed into a true independent personality, which may be awake contemporaneously with the primary consciousness, or may be awake alone, the other personalities being asleep. 2. Other so-called and apparent personalities may be nothing more than the primary self, mutilated by disintegration. 3. The absence of knowledge, and hence amnesia, on the part of the primary self of the subliminal is dependent on the normal psychophysiologic arrangements. 4. The amnesia of one mutilated self for another mutilated self is due to disintegration and to a severance and rearrangement of psychophysiologic associations. 5. Theoretically any number of personalities are possible according to the number and direction of the lines of cleavage. Each personality would depend on different combinations of different disintegrated pieces of the normal self. 6. Personalities may develop accidentally, as the result of accidental fracture, without design, and not be the result of education. 7. The subliminal consciousness is not necessarily the equivalent of the hypnotic self. 8. Personalities may represent any different psychic compounds. One may be that peculiar group of psychic elements which is called the subliminal self, and another may be a disintegrated compound of the ordinary supernatant self. 9. Two or more personalities may have successive existences in time, or when one is the subliminal self they may be co-existent. 10. Personalities, including the subliminal self, may be hypnotized, and thus the personalities may become still further disintegrated.

The details given by Prince, of this case, read almost like a fairy story, but it is obviously impossible to reproduce them more fully here. It is, in its way, a remarkable case from a psychologic point of view, but its medical interest is largely in that it is reported by an eminent neurologist presumably well qualified to study and detect hysteric manifestations and imposition, if they occurred. If the conclusions are accepted, their suggestiveness in many cases of mental derangement will occur readily to many who have had a wide experience with morbid mentality. These possibilities of disintegration of the self do not seem, at first sight at least, to simplify matters, but it may be otherwise estimated by the psychologists. Thus far the case has apparently escaped notice in medical literature, but it is as striking, or even more so, as the classic cases, so often quoted, of Azam, Mesnet and others.

1. Proc. Soc. Psych. Research, xl, Feb., 1901.

SCLERODERMA WITH FACTITIOUS URTICARIA.

It would appear that two sets of affections result from deranged function of the thyroid gland, one due to excessive and the other to diminished activity. The type of those belonging in the first group is exophthalmic goiter, by the side of which it is possible there may be ranged a number of disorders that have been comprehensively included in the designation "vasomotor ataxia," such as symmetrical gangrene, morbid blushing and flushing and dermographism or factitious urticaria. In the second group belong myxedema and cre-

tinism, probably also scleroderma and possibly adiposis.

There are on record cases in which a case beginning as exophthalmic goiter has in the course of time been transformed into one of myxedema, and factitious urticaria not rarely appears in association with scleroderma; so that we have here evidence of the apparently paradoxic fact that there may be present in the same case at the same time indications both of increased and of diminished activity in the function of the thyroid gland. Bettmann[1] has recently placed on record two cases of scleroderma attended with factitious urticaria of a peculiar type. One of these occurred in a military officer, 39 years old, who for four or five months had noted moderate but progressive swelling of both hands, with a sense of coldness in some of the fingers, occasional cyanosis and pallor and circumscribed sloughing. Slight swelling appeared also in the feet, and indurated areas could be felt in the abdominal wall. From time to time, without appreciable cause, hard swellings developed on the feet, pitting on pressure and disappearing in the course of a few hours. In addition transitory irregularly circumscribed painful red spots appeared, especially on the soles. At points where the cathode was applied in the course of electric treatment redness resulted, persisting at times for twenty-four hours—on one occasion gooseflesh, likewise lasting for hours. On drawing the fingernail rapidly and without great pressure over the skin of the chest and the back factitious urticaria deve[l]ped slowly, attaining its maximum intensity in the course of a few minutes, but persisting for an unusually long time—even for five or six days. The second patient was a machinist, 26 years old, with circumscribed induration of the abdominal wall and of the right lower extremity. In this case also factitious urticaria of slow development and lasting for twenty hours could be induced by irritation of the skin of the chest and the back.

Factitious urticaria of from eight to twenty-four hours' duration is exceptional, although it has been observed, but there is no previous record of a duration of six days. In the first case reported the condition persisted unchanged during the two months the patient remained under observation. In the second it subsided coincidently with improvement in the general state. It is impossible to determine whether the peculiar manifestation was related to the scleroderma, either primarily or secondarily, or whether it was merely a coincidental and independent disorder.

1. Berliner Klin. Woch., 1901, No. 14, p. 365.

INFLUENZA OR PULMONARY TUBERCULOSIS?

Since the pandemic of influenza ten years ago there have been annual recrudescences of the disease, and on such intimate terms with it has the laity gotten that it feels competent to make the diagnosis; so that any obscure illness during the winter is likely to be looked upon as influenza. The symptomatology of this disorder, furthermore, is not so sharply defined as always to permit of ready diagnosis, even by the physician, and we fear that the bacteriologic evidence is not often invoked. It would, therefore, not be surprising if much of that which is designated influenza were found actually to be something else.

Dr. R. J. M. Buchanan[1] makes the not improbable suggestion that many of the so-called sporadic cases of influenza are really symptomatic of the initial infection of tuberculosis, or possibly an exacerbation of a latent tuberculosis previously unsuspected or undetected. Some support is apparently given to this view by the contention of a recent writer[2] that influenza is one of the most important predisposing factors in the etiology of tuberculosis.

The following clinical picture may be observed: The patient is seized with headache, rheumatic pains in the lower extremities, with tenderness in the fingers, a feeling of heaviness in the legs and a sense of swelling of the feet, sensations of chilliness alternating with warmth, sweating on slight exertion, increased frequency of pulse and elevation of temperature. Cough develops, with pain on one or the other side, often at the level of the angle of the scapula or in the interscapular or infraclavicular region on one or the other side of the sternum and tightness and constriction of the chest. On auscultation, crepitation may be audible over a small area of the lungs, not uncommonly about the angle of one or the other scapula. The expectoration may be slight and clear, or more tenacious and presenting a gelatinous appearance. The symptoms may subside in the course of a few days, the temperature decline by lysis, convalescence ensue and complete recovery take place. This may be permanent or it may be followed by a return of the previous symptoms. In other cases there may be noted a slowly developing lack of energy and an undue readiness of fatigue. The appetite fails and becomes capricious. Weight is lost and pallor appears.

The lesson taught by observations like these is that the diagnosis of influenza should not be made too lightly, and that in any event the possibility of tuberculosis should be considered and, so far as possible, excluded. The probability of cure in cases of tuberculosis is directly proportionate to the promptness with which appropriate treatment is instituted.

1. Liverpool Medico-Chirurgical Journal, March, 1901, p. 38.
2. Dr. J. Ruhemann: "Aetiologie und Prophylaxe der Lungentuberkulose," Jena, 1900.

ILL-CONSIDERED SENTIMENTALISM.

The trustees of a Chicago juvenile reformatory institution refused to permit the boys under their care to be examined with reference to their physical and mental peculiarities, etc., on the ground that it was, as a local newspaper expresses it, "a sort of psychologic vivisection with incidental publicity." It was held, apparently, that it would be cruelty to subject youthful criminals to any examinations for the purpose of testing for the signs of

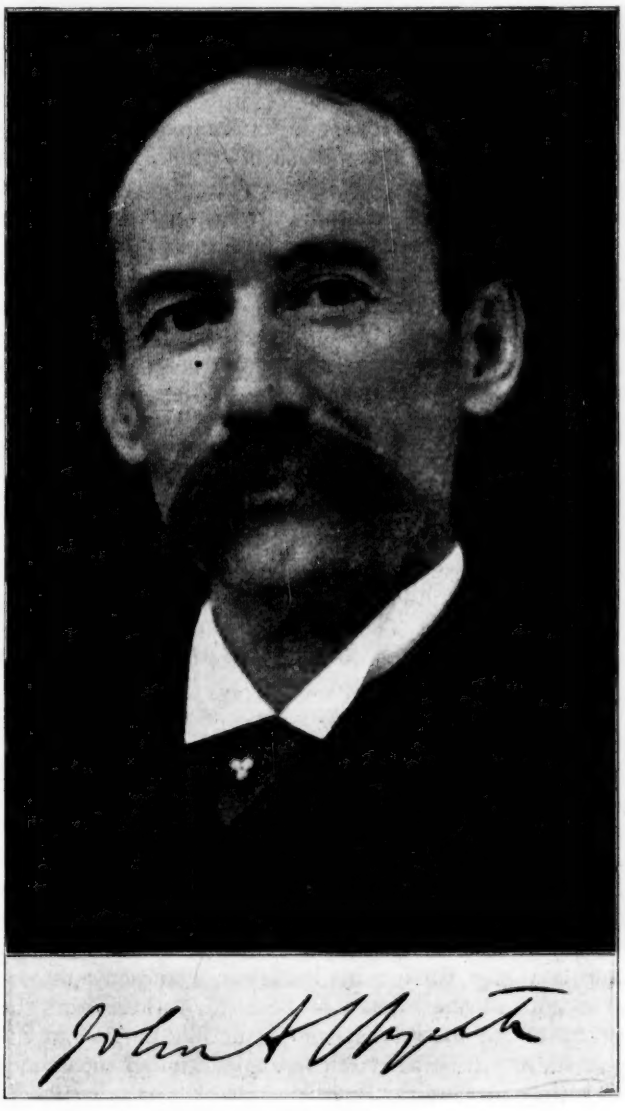
degeneracy. Nothing should be done to make them feel their degradation, and such procedures as were proposed were considered, in the language of the editorial commending the course of the trustees, as "unwarranted intrusion and gratuitous insult." The consideration for juvenile criminals is in line with that for older ones, which seems at times to become a dominating idea of certain sentimental reformers. It should be remembered that the public-school children of Chicago had been put through similar tests without protest, and the publicity would be only of the collective results and not of individual defects. The plea of "gratuitous insult" is, therefore, rather unwarranted, and the refusal looks like a confession of degeneracy and a plea for avoidance of its demonstration. Since such investigations have a certain value to the public, and there is no sound reason for their hindrance, the act of the officials in refusing to permit them in this case can be considered as hardly anything less than a malfeasance in office as well as an exhibition of silly sentimentalism.

BIG PAY FOR A BEGINNER.

The practice of medicine is not considered usually as the most rapid method of building up a fortune, and there is no general impression that is better supported by facts. Occasionally, however, like thunder out of a clear sky, something happens that apparently reverses the order of things, and such has just been reported by the Chicago dailies. What is said to be one of the largest claims ever filed against an estate in the local probate court is the charge of $100,000, by a woman physician of Chicago, against the estate of a millionaire who died in June, 1900, for medical attendance and services under an alleged special contract, according to which she was to care for him as long as he lived. It is not the size of the bill alone that astounds one, but the apparent attending circumstances. She graduated in the spring of 1897. The millionaire died in June, 1900. Hence her medical services as a qualified practitioner could hardly have extended much over two years. This gives the handsome income of nearly $50,000 a year from the date of graduation. Such prizes as this fall to but few, and if the facts are as reported, and the still more important "if" in regard to the collection of her bill results according to her demand, she will be colossally eminent among the practitioners of her sex. Whether she collects her bill or not, she has attained a notoriety, which she may consider desirable; it is not an altogether unnatural suggestion that such demands on estates are sometimes made for the personal advertisement they bring.

PRESIDENT-ELECT DR. JOHN A. WYETH.

The newly-elected President of the AMERICAN MEDICAL ASSOCIATION, Dr. John Allan Wyeth, is a southerner, having been born May 26, 1845, in Marshall County, Ala. His father was Judge Louis Wyeth of Alabama; his grandfather, John Wyeth, one of the early publishers of Philadelphia. His early education was received at the Lagrange Military Academy and during the civil war he served as a private soldier in the 4th Alabama Cavalry. Some of his experiences therein have served for subjects of his later literary work. His medical studies were carried on in the University of Louisville, and later at Bellevue Hospital Medical College, New York. After a brief period of practice in Alabama he removed to New York City, where he quickly became a prominent figure in the profession, taking almost at once a position on the teaching force of his alma mater, and also an active part in society proceedings and medical matters generally. Since then his record is before the profession; it is needless to say that it is an honorable one, and one that includes numerous



John A. Wyeth

and valuable contributions to the sum of medical knowledge. It is indeed by his practical work in surgery that he is best known to the general profession, and this has made his name a familiar one to every practicing physician. His contributions to surgery and other departments need not be enumerated; they include not only many articles in the current medical literature, but also a well-known text-book and other works of note. It is not only as a scientific medical writer that he is known, he has contributed also to general literature, his best known work being his life of General N. B. Forrest, which has a decided historic as well as a literary value.

THE CORPUSCULAR HYPOTHESIS.

Up to the present the atom has been looked upon as the expression of the ultimate divisibility of matter, and all our theories have been moulded on this conception. No chemical inference has been able as yet to make probable any breaking up of this unit, but recent physical research seems likely to undermine our belief in its indivisibility. In a recent lecture on cathode-ray phenomena, Prof. J. J. Thomson demonstrated the results of a series of remarkable studies of certain electrical phenomena that indicate the possibility that what we have been calling atoms, and considering as the ultimate particles, are themselves only combinations or constellations of still more minute bodies. The details of these researches are too elaborate to be reproduced and, though stated in a semipopular form by Professor Thomson, are still not easy to make readily comprehensible to the casual reader not already considerably familiar with the physics of electricity. Taking only the statement of the results as given, it would appear that the particles sent out by the cathode rays, and also from certain metals or minerals, such for example as radium, and from all metals when sufficiently heated, convey charges of electricity which, supposing them to be atoms, are one thousand times greater than is carried by an ion in electrolysis. By an ingenious calculation based on certain known facts on condensation of moisture, Professor Thomson has been able to demonstrate that the charge conveyed was the same as in electrolysis, but that the particles conveying it were only one-thousandth the weight of a hydrogen atom. These corpuscles, as they have been named, are always negatively electrified; as far as known, nothing smaller than an atom is ever positively electrified. The final outcome of these researches, as the *Electrical Review* says, lies "in the womb of the future," but the suggestion, however indefinite it may be, of their possibilities, is inevitable. We have only to consider what has been already gained from the X-ray in medicine and surgery to see the probability of rational explanations in the future of much of what has been and is still to us mysterious and unknown. It is not worth while, however, to build on these results any too expansive deductions. To quote again from the *Electrical Review*: "The puzzle of the universe will no doubt be only moved back one step further by Professor Thomson's discoveries, and we shall doubtless be as far as ever from the dream of the materialists of the middle portion of the past century, who looked to an explanation of the cosmos on purely mechanical lines."

THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH.

From apparently authentic sources, it is announced that the preliminary steps have been taken for the establishment in New York City of an institute for medical research, by Mr. John D. Rockefeller, whose name it is to bear. That he has seen fit to set aside a considerable sum of money for the advancement of medical science in this country will be hailed with universal approbation. We hope that his example may not long remain isolated, but that other wealthy men with liberal tendencies may find medicine and medical institutions, hitherto somewhat neglected, worthy objects for their generosity. The eloquent plea of Dr. W. W. Keen,[1] in his presidential address before the AMERICAN MEDICAL ASSOCIATION last year, for endowments for medical institutions, sets forth most adequately the special grounds why endowments are needed, and it is certainly encouraging and stimulating to learn that Mr. Rockefeller has become a patron of scientific medicine. The purpose of the institute is to furnish facilities for original investigation, particularly in such problems in medicine and hygiene as bear upon the prevention and treatment of disease. The board of directors is composed of prominent pathologists and physicians in the large cities along the Atlantic coast, four of the seven members residing in New York. It is not intended to build immediately, but abundant funds have been placed at the disposal of the board so that research will be undertaken at once in several different laboratories. Buildings and equipment commensurate with the scope and aim of the foundation will receive consideration later. This announcement is a fitting one for the beginning of the new century, and it is fraught with great benefits to medicine in general. It will ultimately result in the establishment in New York City of an institution similar to the Pasteur Institute in Paris, the Institute for Infectious Diseases in Berlin, the Institute for Experimental Medicine in St. Petersburg, and the Jenner Institute in London. At this institute will be collected able original investigators, who will bend their energies to the solution of hidden problems in medical science, unhampered by other and often quite irksome duties. The plan adopted in regard to the work for the immediate future increases the opportunities for research very greatly indeed, and will appeal strongly to young men who are looking for just such advantages. It stands to reason, however, that the general and actual results to be expected from this plan can hardly equal in importance those that will be obtained when trained, mature investigators set to work in a properly equipped and fully organized institute.

SMALLPOX PROBABLY SPREAD BY INFECTED FEATHER BED.—The State Communicable Disease Inspector has reported to the Michigan State Board of Health office that in one case of smallpox which he visited recently he was informed that the child sick with smallpox had been for a few nights sleeping on the same feather bed on which one of the relatives of the family laid in Missouri, in which family smallpox existed, about two years ago. There was no other known source from which the disease could have been contracted by the child. The feather bed was sent to the family in Michigan from the family in Missouri some little time ago. This should be a warning to persons having dangerous communicable diseases in their families, to be sure that all things are thoroughly disinfected before using them again.

TO REMOVE ADHERENT DRESSINGS.—Mikulicz moistens the edges of the gauze with a little peroxid of hydrogen, and no matter how firmly they may be attached or mixed with the tissues, the effervesence of the peroxid mechanically detaches them at once, without the slightest pain or inconvenience.

1. JOUR. A. M. A., June 9, 1900.

Association News.

AMERICAN MEDICAL ASSOCIATION.

Fifty-second Annual Meeting, held at St. Paul, Minnesota, June 4-7, 1901.

OFFICIAL MINUTES OF THE GENERAL SESSIONS.

JUNE 4—FIRST GENERAL SESSION.

The Association met in the Metropolitan Opera House, and was called to order at 10:20 a. m. by the Chairman of the Committee of Arrangements, Dr. John F. Fulton, of St. Paul.

Prayer was offered by Bishop H. B. Whipple, after which Dr. Fulton introduced the Hon. R. A. Smith, Mayor of St. Paul, who delivered an address of welcome.

Address of Welcome.

In behalf of the City of St. Paul I extend to you my most cordial welcome. Aside from the natural pride which each man has in the community in which his life is cast, I believe there is much to warrant me in extending to you my congratulations on selecting St. Paul as the scene of your National Convention. Here you have exemplified, to an extent visible perhaps nowhere else in the world, the magic influence on the public and the individual health of favorable natural conditions. These natural conditions have been availed of to the utmost by the local members of your profession in the practice of their grand calling, so that your present hosts, the good people of St. Paul, thus enjoy the double blessing of long life and small doctor-bills.

St. Paul, as the statistical records of mortality show, is the healthiest city in the world; and it is so, I believe, in greatest measure, because of the high degree of perfection to which your profession has brought the science of hygiene. To the individual members of your profession among our fellow citizens, and especially to those of them who have from time to time been charged in our official life with the protection of the health of our people, we all regard ourselves as deeply indebted. Their profession, too, is indebted to them for the splendid demonstration they have here offered of the wonderful results which can be accomplished through the intelligent direction of the skilled physician and surgeon.

Within the lifetime of a single generation the soil upon which you now stand has upheld the Indian tepee. Here the Indian Medicine Man has, within that period, wrought his charms. The Indian tepee has been succeeded by the modern equipped hospital and the sanitary human dwelling; the incantations of the Indian doctor are forever silenced, and the cold and impersonal influence of medical and surgical science—as typified in the Medicine Man of Civilization—sways the lives and conserves and protects the health and happiness of human society. The change from the old conditions to the new, as illustrated in fifty years of life in the Capital City of the Great Northwest, is such as not only the members of your profession, but humanity itself, should rejoice in.

In common with all our people I sincerely hope that your stay with us will bring to each and every one of you that sense of pleasure, and leave with you those cherished recollections which enter so largely into the delights of the lives of all of us. The welcome which the people of our city extend to you is indeed a sincere one; and I beg of you not to measure its depths by my own unfortunate inability to give expression to it.

If most of you should not, as I believe you will not, come among us again, I feel that it is good advice for all of you to take with you—that if you can not come again yourselves you will at least send us those of your patients whom you can not cure, and we will send them back to you in such a condition of health that if they are not thereafter living monuments to your skill, they will at least all live long enough to prevent any alarming fluctuations in the visible supply of patients. (Applause.)

After the address of welcome by Mayor Smith, Dr. Fulton presented the President of the Association, Dr. Charles A. L. Reed, of Cincinnati, Ohio.

President Reed, on taking the chair, invited the vice-presidents and all ex-presidents of the Association who were present to take seats upon the platform.

Dr. Philip Marvel, of Atlantic City, third vice-president, took the chair, and President Reed delivered his address, which was punctuated with applause throughout its delivery.

At the close of the address, Dr. Ingals, of Illinois, moved that the President's address be referred to the Executive Committee, with instructions to report back to the Association on its many valuable recommendations. He moved further that the thanks of the Association be extended to the President for his able address and for the careful review of the numerous subjects of interest to the Association. Carried.

At this juncture, Dr. J. R. Pennington, of Chicago, made a brief speech, during which he unveiled the portrait of Dr. N. S. Davis, of Chicago, the subject of his remarks.

Presentation of Portrait of Dr. N. S. Davis.

Mr. President and Members of the American Medical Association: Of all the methods adopted by artists for perpetuating the memory of those who have acquired distinction in any department of human activity, none, as suggested by the President in his able address, are more pleasing to the majority of intelligent men and women than correct portraits that present, not only the contour, but also much of the living expression of those they represent. Consequently a large proportion of the higher educational institutions and permanently organized scientific, philosophic and professional organizations, seek to preserve the portraits of their founders and more distinguished members as a part of their permanent archives.

In the hope of initiating work in this part of the archives of the American Medical Association, I come prepared to present for your acceptance the portrait of *one* whom you will all recognize as pre-eminently the founder of this Association, and for more than fifty years its most constant attendant and faithful guide in every department of its work: One who has perhaps done more than any other individual in promoting the efficient social organization of the medical profession throughout the United States, and in elevating the standard of medical education: One who has been a pioneer investigator in the departments of physiology, hygiene, preventive medicine and medical journalism: One who has been an untiring and valuable contributor to medical science and literature, and who has enjoyed the highest official honors that his profession could bestow—President of this Association and of the Ninth International Medical Congress: One who in his own city organized the first permanent general hospital and established clinical instruction therein, and who was one of the founders and active supporters of the Chicago Relief and Aid Society for aid to the poor, of the Chicago Academy of Sciences, the Chicago Historical Society and the Chicago Medical Society: One who has been a life-long advocate and exemplar of temperance, morality and religion, and who still, in his 85th year of life and 65th year of medical practice, devotes five or six hours daily to his patients and attends promptly to all the duties of good citizenship in strict obedience to his favorite maxim, "He is most happy who is contributing most to the happiness of others."

Now, Mr. President, I have the honor of unveiling the portrait of Dr. N. S. Davis, the subject of these remarks, and trust that its acceptance will carry with it the appointment of a committee to secure without cost to the Association the portraits of all the ex-Presidents of the American Medical Association.

On motion of Dr. Warner, the portrait of Dr. Davis was accepted by the Association, and thanks extended to Dr. Pennington for its presentation.

Dr. Love, of New York, moved the appointment of a committee of three for the purpose of securing portraits of all living presidents and ex-presidents of the Association, as far as possible, and expressed the hope that the time would come when the Association would have a magnificent home with a building of its own in which upon the walls may be hung the portraits of the living presidents of the Association and the noble men who had died. Carried.

The President announced that he would appoint this committee later.

Dr. Simmons, the Secretary, then read his report, which was referred to the General Executive Committee.

Report of Secretary.

To the Officers and Members of the American Medical Association: As nothing of especial importance has arisen during the past year in connection with my office, my report as Secretary will be brief and will consist in simply congratulating you on the continued increase in membership and the prosperity of the Association. The membership at the present time is some-

thing over 10,600, which shows an increase over last year of between 1500 and 1600—the largest increase in any year in the history of the Association. I have submitted to the Judicial Council, *pro forma*, correspondence in regard to two special cases of membership for its decision and advice.

I wish to call attention to Article VIII of the Constitution, under duties of the "Committee of Arrangements." In this article is the following: "It shall be the further duty of this committee to verify and report upon the credentials of membership, to receive and announce all essays and memoirs voluntarily communicated, either by members of the Association, or by others through them, and to determine the order in which such papers are to be read and considered, and to fix a definite hour each day for the general addresses before the Association. This committee shall prepare for publication the official program of each meeting, and with such program it shall publish the Constitution, By-laws and Code of Ethics of the American Medical Association."

I also call attention to Section 5 of Article III of the By-laws, the first paragraph of which is as follows: "It shall be the duty of every member of the Association who proposes to present a paper or report before a Section, to forward either the paper or an abstract indicative of its contents, and its length, to the Chairman of the Committee of Arrangements," etc. As the above duties have for years, and are now, performed by the Secretary, I would suggest that the Constitution and By-laws be amended to accord with existing conditions in this regard. Respectfully submitted,

GEORGE H. SIMMONS, Secretary.

Dr. L. Duncan Bulkley read the report of the General Executive Committee.

Report of General Executive Committee.

The General Executive Committee held its first session of this meeting yesterday afternoon and considered carefully the program for 1901 in reference to the various regulations concerning it which had been passed at last meeting of the Association, and beg to report as follows:

In former years it has been noted that the number of papers was largely in excess of what was right and necessary and by resolution of the Association directed that the number be considerably reduced, to perhaps not over 35 in each Section. This has been measurably well accomplished and the total number of papers on the program this year is 391 as against 491 last year, and 615 in 1898, the highest number reached. The largest number in any section this year is in that of Practice of Medicine, 43 papers.

The committee beg, however, to call the attention of the Association to the fact that the regulation adopted some years ago and reinforced last year, providing for abstracts of papers for the program, has not been carried out to any great extent, and submits the following figures. Of the total number, 391 papers, there were abstracts printed of only 196, while 205, or the majority of them, had no abstracts printed. The committee recommends for adoption by the Association, the following resolutions:

Resolved, That hereafter no titles of papers be printed in the program unless the required abstract is furnished and printed in connection with the same.

Resolved, That the Secretary of the Association prepare and issue to all the chairmen and secretaries of Sections, printed slips containing the rules and regulations in regard to the length of papers, their abstracts, and also some printed matter which can be sent by the officers of sections to those desiring to read papers, that they may be fully informed of the rules of the Association in advance.

The committee have to report that, in accordance with instructions, they arranged with Dr. Flexner, of Philadelphia, to give a pathologic lecture on Wednesday evening, illustrated with lantern slides. At the very last moment a telegram came from Dr. Flexner saying that he was unable to carry out his proposed plans and the committee have only to regret that the notice was received too late for them to substitute another essayist. The committee therefore announce that the pathologic lecture, as stated on the program for Wednesday evening, will not be given.

The committee desires to call attention to the absence from the program of the rule governing the submission of abstracts for publication, and also that requiring the Sections to adjourn during sessions of the General Association.

L. DUNCAN BULKLEY, Secretary.

Inasmuch as this report contained several items, each item was considered separately and adopted.

It was then moved that the report be adopted as a whole, which was seconded and carried.

The President announced as the next thing in order the joint report of the Treasurer and the Board of Trustees, which was read by Dr. T. J. Happel, Tennessee.

Report of Board of Trustees.

Report of the Board of Trustees of THE AMERICAN MEDICAL ASSOCIATION, made at St. Paul, Minn., June 4, 1901:

To the Officers and Members of the American Medical Association:

As required by our Constitution and By-Laws, your Board of Trustees begs leave to submit the following report. We desire, however, before entering upon the report, to state that heretofore it has been customary for the Treasurer to submit his report direct to your body, but under our laws, it is made the duty of your Board of Trustees to "annually audit and authenticate his accounts, and present a statement of the same in its annual report to the ASSOCIATION." This duty we have performed, and in our JOURNAL report, that of the Treasurer is included. The combination of the two reports in one prevents confusion and repetition, inasmuch as the receipts of the ASSOCIATION are represented by the two accounts jointly, the Treasurer receiving and receipting for membership fees, and the interest on investments, whilst the JOURNAL receipts for all subscriptions, advertisement sales, etc.

We would add further that all of the accounts of the Treasurer and THE JOURNAL office have been carefully scrutinized by expert accountants, and certified to as all correct in every respect:

REPORT OF TRUSTEES OF JOURNAL A. M. A., FOR YEAR ENDING DEC. 31, 1900.

Your JOURNAL business shows for the year 1900 as follows:

1900.	Debits.
Jan. 1.—Cash on hand, Treasurer's office	$13,556.36
Jan. 1.—Cash on hand, Journal office	799.15
Loans repaid during year 1900	3,163.50
Membership fees for year 1900	40,110.00
Registration fees, Atlantic City	6,150.00
Interest on bonds, U. S	525.00
Advertisements	44,060.70
Subscription	17,618.94
Reprints	2,525.18
Section reprints	405.70
Buttons	568.65
Sales	558.93
Jobbing	1,492.00
Postage	12.70
P. Marvel	239.27
Chicago Pathological Society	451.35
Electros	129.33
Sundries	169.11
Metal	23.85
Loss and gain	50.00
Pay roll refunded	5.51
American Academy Railway Surgery	162.00
General expense	10.22
	$131,787.45

EXPENDITURES IN TREASURER'S OFFICE.

	Credits.
Mergenthaler Linotype Co., Balance, two machines	$5,400.00
Linotype machine rent one year	550.00
Crocker-Wheeler Motor for Journal office	225.00
Latham Machine Co., stitcher Journal office	223.25
Printing press for Journal office	2,925.00
Paper cutters for Journal office	325.00
Salary of clerk for Treasurer	300.00
H. P. Newman, Treasurer, honorarium	1,000.00
Postage for Treasurer's office	540.00
Sundries for Treasurer's office	82.28
Premium on Treasurer's bond	100.00
Trustees' account, Chicago meeting	452.50
Trustees' account, Atlantic City meeting	844.35
Incidental expense of Trustee	25.20
Expenses of secretary of Trustee	36.70
W. B. Atkinson, salary and expense acct., Atlantic City	138.00
H. P. Newman, salary and expense acct	98.00
G. H. Simmons, Editor, Atlantic City	75.00
Stenographers, Atlantic City	1,113.63
E. A. Reilly, expense registration, Atlantic City	280.25
R. A. Hamilton, services	52.12
B. G. Kalb, stenographer, Atlantic City	105.00
Extra services, Spec. R.R. Agt., Atlantic City	29.00
Philip Marvel, Chairman Committee Arrangements	370.42
Gold Medal Prize	85.00
Geo. M. Gould, express on prize medal acct	2.70
Safety box rent	10.00
Expense account, list of members for Journal	25.00
Expense, U. O. B. Wingate	210.50
Expense account of Committee on National Legislation	226.20
Expense pathologic exhibit	246.53
Secretary's office (ledger)	7.00
Exchange on collections	49.00
Duplicate fees, Ret., Atlantic City	40.00
Total Treasurer's office	$16,192.63

EXPENDITURES IN JOURNAL OFFICE.

Pay roll	$25,560.86
Salaries	11,788.33
Editorials, reporting and news	6,775.13
Rent	1,500.00
Journal stock paper	25,192.07
Miscellaneous paper	1,430.26
Second-class postage	5,616.06
Stamps	2,124.07
Stamped envelopes, Committee Arrangements	233.20
General expense	2,381.53
Traveling expenses	388.90
Advertising and subscription commissions	4,956.79
Collection and exchange	181.28
Button account	735.86
Ink	1,069.80
Electros	994.03
Type	200.32
Electric power	740.15
Metal	183.83
Sundries	60.85
Accountant's charges	200.00
Press-room and office furniture and fixtures	453.02
Book-shop bindery (binding)	376.34
Bindery supplies	68.72
Smith-Premier Typewriter Co.	163.89
Shaw-Walker Co.	75.31
Sales	118.00
Section reprint, express charges	47.99
American Medical Association, express charges	46.43
C. U. Gordon, P. M. deposit	60.00
Subscription account refunded	93.07
Reprint account refunded	9.25
Linotype appliances	57.49
Machinery supplies	546.57
Jobbing account refunded	50.00
Advertising account refunded	3.25
American Academy Surg. reporting	60.00
Total expense Journal office	$94.542.65

Total expense Treasurer's office for year 1900	$16,192.63
Total expense Journal office	94,542.65
Aggregate	$110,735.28
1901.	
Jan. 1.—Cash in hand of Treasurer	$15,512.23
Jan. 1.—Cash in hand of Journal office	5,539.94
Aggregate	$131,787.45
Jan. 1, 1899, cash bal. on hand	$18,729.95—Treas.
Jan. 1, 1900, cash bal. on hand	13,566.56—Treas.
Jan. 1, 1901, cash bal. on hand	15,512.23—Treas.
Jan. 1, 1899, cash bal. on hand	$931.31—Journal
Jan. 1, 1900, cash bal. on hand	799.15—Journal
Jan. 1, 1901, cash bal. on hand	5,539.94—Journal
As compared with Jan. 1, 1900, you have in your Treasurer's hands now a larger amount by	$1,945.87
And in the Journal office a larger amount by	4,740.79
Total	$6,686.66

But you have $3,000.00 less invested, the Indianapolis loan having been repaid.

Cash on hand is as follows:

Jan. 1, 1901, invested in U. S. bonds	$10,812.50
Jan. 1, 1901, cash in Treasurer's office	15,512.23
Jan. 1, 1901, cash in Journal office	5,539.94
Total	$31,864.67
As compared with Jan. 1, 1900	28,168.01
Excess	$3,696.66

In addition to this, you have paid out for machinery in the printing department as follows:

Two Mergenthaler linotype machines	$5,400.00
One Mergenthaler linotype machine, rent one year	550.00
One Crocker-Wheeler motor	225.00
One Latham Machine Co. stitcher	223.25
For printing press	2,925.00
For paper cutter	325.00
Total paid out for machinery	$9,648.25

There was estimated in the report of last year the cost of the press, $2,925.00; one stitcher, $223.25; one motor, $225.00; one linotype machine, $3,100.00; total $6,473.25

Making an excess over estimate of 3,175.00

Now, in addition to this, we have bought a third linotype machine, paying cash down as one year's rent on the same $550.00

We owe a balance on this machine of 2550.00

Our paper account, as well as all others, has been paid for to date.

If now you add to the excess of cash of the year 1900, over that of 1899	$3,696.66
the amount paid out for machinery during the year 1900, as shown above	9,648.25
You have your profit for 1900	$13,344.91

Your Board would report to you that we ordered enough money invested to make our investment, when added to the $10,000 in United States bonds, about equal to the sum of $25,000, par value. We trust this will meet your approval. Toward securing a permanent home for THE JOURNAL, you now have invested in gilt-edged securities $25,000, which yearly grows by the interest at least.

PLANT.

We do not deem it necessary to give a detailed inventory of press-room and proof-room furniture and fixtures. The additions to the same would fully balance wear and tear and would leave us with about the same valuation as last year, viz., $515.

OFFICE FURNITURE AND FIXTURES

Can be disposed of in the same way, $1004.50.

MACHINERY AND PLANT.

In this department everything has been paid for except the third linotype machine, the account for which is not yet due. The value of this department, not including the linotype machine, is $19,571.80.

RECAPITULATION.

The sum total of the items mentioned, viz., press-room, proof-room and office furniture and fixtures, and machinery and plant, less 5 per cent. for wear and tear, after all additions, amounts to about $21,000. The office, with the addition of one or two small motors which your Editor was authorized to buy, is almost complete, and can now do all of its own work. Its quarters are crowded, and for that reason some things can not be done to the best advantage.

There has been a steady growth in THE JOURNAL. An effort has been made by your Trustees and Editor to increase the quantity and quality of the reading matter in THE JOURNAL. It should be the best medical journal published in the world. With the support of a united profession it can be so made.

Your Board of Trustees has endeavored also to carefully guard the advertising pages of THE JOURNAL. Many advertisements have been refused, the quality of which were questionable. The formulæ of all internal medicines have been demanded, and as a rule published with the first insertion of each advertisement. This rule has not been so rigidly applied to medicines for external use. All medicines advertised in the newspapers, for the benefit of the laity, have been refused space in THE JOURNAL. A few contracts that had been made before such an order was passed had to be filled. As a result of the adoption of this rule some medicines that were advertised direct to the laity have been withdrawn from the newspapers and now appear in medical journals alone.

ADVERTISING DEPARTMENT.

The following comparative statement indicates the increase in advertising collections during the past twelve months: Collections for 1899 were $33,760.82; for 1900, $44,060.70; showing a gain of $10,299.88.

Our advertising collections for 1898 were $23,629.71, thus indicating an increase of $20,430.99, nearly doubling our revenue from this source in two years.

For the four weeks of January, 1901, THE JOURNAL carried over $1000 worth of advertising in each issue, and unless something unforeseen happens, there is no reason why this average should not be maintained throughout the year, making the revenue from advertising for 1901 considerably in excess of that of 1900.

SUBSCRIPTION DEPARTMENT.

The following figures indicate the gross issue of THE JOURNAL each week during 1900:

Weekly Edition.			*Weekly Edition.*	
Jan. 6...	14,350		July 7...	17,550
Jan. 13...	14,350		July 14...	17,600
Jan. 20...	14,600		July 21...	17,600
Jan. 27...	14,600		July 28...	17,525
		57,900		70,275
Feb. 3...	14,600		Aug. 4...	17,550
Feb. 10...	14,800		Aug. 11...	18,100
Feb. 17...	15,200		Aug. 18...	18,100
Feb. 24...	15,200		Aug. 25...	18,100
		59,800		71,850
March 3.	15,200		Sept 1...	18,050
March 10.	16,125		Sept. 8...	18,350
March 17.	15,600		Sept. 15...	18,500
March 24.	15,700		Sept. 22...	18,680
March 31.	15,950		Sept. 29...	18,640
		78,575		92,220

April 7..	15,800		Oct. 6....	18,725	
April 14..	16,550		Oct. 13....	19,090	
April 21..	17,100		Oct. 20....	19,000	
April 28..	16,300		Oct. 27....	19,200	
		65,750			76,015
May 5...	16,150		Nov. 3...	19,250	
May 12...	16,100		Nov. 10...	19,185	
May 19...	27,000		Nov. 17...	19,230	
May 26...	17,500		Nov. 24...	19,300	
		76,750			76,965
June 2...	16,600		Dec. 1...	20,000	
June 9...	17,100		Dec. 8...	20,100	
June 16...	17,000		Dec. 15...	20,600	
June 23...	17,000		Dec. 22...	20,650	
June 30...	17,400		Dec. 29...	20,650	
		85,100			102,000
		423,875			483,325

	1900.	1899.
Grand total	907,200	710,750
Weekly average	17,446	13,672

The total number of copies issued during 1899 was 710,950, during 1900, 907,200, indicating an increase of 196,250, or 27 2/3 per cent. The following indicates net gains and losses for twelve months ending Jan. 1, 1901:

STATE.	Gain for the Year.	Loss for the Year.
Alabama	104	..
Alaska	1	..
Arizona	3	..
Arkansas	24	..
California	49	..
Colorado	29	..
Connecticut	86	..
North Dakota	1	..
South Dakota	10	..
Delaware	11	..
District of Columbia	60	..
Florida	15	..
Georgia	308	..
Illinois	391	..
Idaho	5	..
Indian Territory	12	..
Indiana	199	..
Iowa	224	..
Kansas	122	..
Kentucky	69	..
Louisiana	69	..
Maine	..	17
Maryland	146	..
Massachusetts	81	..
Michigan	141	..
Minnesota	53	..
Missouri	228	..
Mississippi	17	..
Montana	10	..
Nebraska	97	..
New Mexico	5	..
Nevada	2	..
New Hampshire	32	..
New Jersey	229	..
New York	530	..
North Carolina	69	..
Ohio	122	..
Oklahoma Territory	35	..
Oregon	13	..
Pennsylvania	535	..
Rhode Island	10	..
South Carolina	99	..
Tennessee	293	..
Texas	101	..
Utah	11	..
Vermont	7	..
Virginia	154	..
Washington	30	..
Wyoming	10	..
West Virginia	16	..
Wisconsin	133	..
U. S. Army	78	..
U. S. Marine-Hospital	..	..
Canada	9	..
Cuba	..	3
Hawaiian Islands	2	..
Mexico	6	..
Philippine Islands	11	..
Porto Rico	7	..
Foreign	8	..
	5122	20

The figures given below indicate the count of the mailing list Jan. 1, 1901, as compared with that of Jan. 1, 1900:

	Jan. 1, 1900.	Jan. 1, 1901.
Copies to members	8445	9841
Copies to subscribers	4623	8339
Copies to advertisers	233	306
Copies to exchanges (domestic)	153	149
Copies to exchanges (foreign)	59	49
Copies to med. colleges and libraries	108	113
Copies to subscription agents	4	45
	13,635	18,842

This indicates an increase of 5207, of which 5102 are new members and subscribers. This is nearly double the increase of 1899 over 1898, the increase in members and subscribers in 1899 being 2,628.

The following is a comparative statement of the net subscription collections for the years of 1899 and 1900:

	1899.	1900.
January	$1,094.46	$3,614.08
February	525.25	1,167.24
March	952.76	1,388.89
April	741.27	1,719.06
May	669.93	1,585.90
June	733.05	1,334.75
July	1,851.73	3,456.42
August	1,208.38	1,246.03
September	798.36	1,273.91
October	1,313.20	3,285.49
November	920.71	1,748.12
December	1,474.42	1,872.14
	$12,283.52	$23,697.03
Indicating an increase of		$11,408.51

Our subscription collection for January, 1901, were $4,862.74, which is $1,248.66 more than that for January, 1900.

THE JOURNAL has made an effort to improve in the quality of reading matter. How well it has succeeded you must judge. The figures presented in the first part of this report show that as a matter of financial policy it has been a success. As the number of readers of THE JOURNAL increases, it becomes more and more valuable as a medium of medical advertising, and the increase in revenue from that source shows that advertisers are not slow to appreciate that fact.

The Board of Trustees would also call attention to the fact that the frequent changes made in the program of the work of the Sections, all of which work is done in THE JOURNAL office, adds much to the expenses incident to printing of the JOURNAL. Your Board has deemed it best to instruct the Editor to make no changes in the program after May 4 of each year. It is suggested also that too many papers are on the programs of some of the Sections, and many of them are read only by title, and yet they must be treated and published, as if read and discussed by the Section. Your Board would suggest that such papers should be treated as volunteer papers. Especially should this apply when more than one paper is furnished by the same author at any annual meeting. In arranging the programs of the work of the different Sections your Board would suggest that the secretaries give preference to those who write for only one Section, over those who have furnished, or propose to furnish, papers for two or more Sections. This will limit the number of papers, and will tend to improve the quality. This course will become a necessity in view of the increased number of Sections, and the fact that each Section will be furnished a reporter so that all discussions can be reported in full. Under an order from your Board of Trustees, all stenographers will be employed by the Editor, to enable him to control all papers, and abstracts of the same. Your Board having directed an enforcement of Section 7 of the By-laws, in regard to the publication of papers, no paper will be published in THE JOURNAL which has appeared in full or in abstract form in any other journal, and no stenographer will be re-employed who furnishes any such abstract to any other journal.

Unless some curtailment of the number of papers to be published in THE JOURNAL can be obtained along the lines just suggested, the publication of many valuable papers read at our annual meetings must of necessity be delayed for nearly a whole year, a thing pleasant neither to the writer nor Editor. The ASSOCIATION might come to the relief of the Editor by limiting by by-law or otherwise the number of papers in each Section to thirty-five. If this is done, and the papers not read are ordered treated as volunteer papers, then much more room can be gotten in THE JOURNAL for papers from some of the best medical men in this country.

In order to still further improve the quality of the material, to eliminate as far as possible all that would be of little value to our readers and to fix the responsibility for all that is admitted to the pages of THE JOURNAL, your Trustees suggest that hereafter no paper presented to any section shall be printed until it has received the approval of the three members of the Executive Committee from that section, evidenced by their signatures to said paper.

INCREASED EXPENSES.

A glance at the credit side of your financial exhibit will show that with the increase in your circulation there has been a pro rata increase in certain expenses connected with your JOURNAL. The paper bill for the year 1900 was $2,874.23 more than during 1899, and second-class postage $1704.41 more, and ink $427.01 more; making an increase in these three items alone of $5005.65. It is not necessary to enumerate other items. These are presented as object-lessons.

We have referred to a few of the many sources of unnecessary expenses connected with the publication of our JOURNAL. Many of them could be avoided, if all Section officers, as well as ASSOCIATION officers, would make it a rule in future to comply with the letter of our Constitution and By-laws. Let all papers not considered worthy to appear in THE JOURNAL be passed upon and rejected by the Section officers, and not throw the burden of this responsibility upon the Editor or the Publication Committee of the Board of Trustees. Let the number of papers be limited to thirty-five to the Section, and let no changes be made in the programs of the Sections after May 4.

We present you this report in printed form, gotten out in our JOURNAL office, so as to have it ready for distribution to each member of the ASSOCIATION as he registers at our annual meeting. We trust that the work of your Board will meet your approval. In closing this report, we feel that we can present THE JOURNAL to you at the close of business at the end of the fiscal year, Dec. 31, 1900, as no longer an experiment in medical journalism, but as an assured success—a journal of which the ASSOCIATION may well be proud.

Respectfully submitted,

A. GARCELON, President,
H. L. E. JOHNSON, Secretary.
E. E. MONTGOMERY,
I. N. LOVE,
JOSEPH M. MATHEWS,
E. FLETCHER INGALS,
MILES F. PORTER,
W. L. RODMAN,
T. J. HAPPEL,
Board of Trustees.

On motion of Dr. Tuckerman, Ohio, the joint report of the Treasurer and Board of Trustees, with the recommendations contained therein, was adopted.

Dr. Bishop, Pennsylvania, moved that the Board of Trustees and the Editor of THE JOURNAL be extended a vote of thanks for their valuable and efficient services, which was unanimously carried.

The President announced as the committee to secure portraits of ex-presidents and living presidents, Drs. J. R. Pennington, of Illinois, W. L. Rodman, of Pennsylvania, and N. P. Dandridge, of Ohio. He also suggested in this connection that at present the Association had no appropriate depository for the excellent work of art which had been presented, and that it would be well for the committee to make arrangements to deposit this portrait of Dr. Davis in some art gallery until such time as the association would be able to provide quarters for its own art treasures.

The next thing in order was the report of the Committee on National Legislation, which was read by the Chairman of the Committee, Dr. H. L. E. Johnson, of Washington, D. C.

Committee on National Legislation.

Second Annual Report of the Committee of the American Medical Association on National Legislation, presented to the St. Paul Meeting, June 4, 1901.

WASHINGTON, D.C., June 4, 1901.

To the President and Members of the American Medical Association:

Gentlemen:—We have the honor to report that at the last meeting of your Association, the constitution and by-laws were amended so as to provide for a standing committee known as the committee on National Legislation, said committee to be appointed annually by the President. In conformity with this, your honorable President appointed the following named gentlemen to constitute that committee: Drs. William L. Rodman, of Philadelphia, William H. Welch, of Baltimore, and H. L. E. Johnson, of Washington, D.C., who had served in this capacity during the past year, and reported to the Association at the meeting at Atlantic City, their work during the year with the recommendations, and the minutes of the annual conference held at Washington, D.C., with the delegates from the state societies, and the army and navy marine-hospital services. Their proceedings and recommendations were favorably reported upon by your General Executive Committee, and subsequently approved by the American Medical Association in general session.

We are pleased to report that as a result of the combined efforts of your committee, and the delegates to the annual conference, the obnoxious Senate Bill No. 34 entitled, "For the Further Prevention of Cruelty to Animals in the District of Columbia," known as the "Antivivisection Bill," has been defeated, and rendered practically impossible of passage in the future. As a result of the second annual conference held at Washington, Feb. 20 and 21, 1901, we have the honor to report the passage of Senate Bill No. 4171, entitled, "An Act Granting Additional Quarantine Powers and Imposing Additional Duty upon the Marine Hospital Service," and the defeat of Section 150 H. R. Bill 13,423, "The Codification of Postal Laws." This section, if it had become a law, would have cost the American Medical Association about $30,000 extra in postage in connection with the distribution of THE JOURNAL to our members and subscribers. We observe with great satisfaction and hope for future national influence of the American Medical Association, and the Committee on National Legislation, that the medical societies of the several states and territories are beginning to appreciate the importance of the annual conference, and the necessity of state co-operation in matters of medical legislation, both local and national, as evidenced by the increased attendance at the second annual conference which was held at Washington, D. C., in February last, at which conference the delegates in session appointed the standing committee of the second annual conference with full power to represent them, and act, *ad interim*, in all medical matters arising in the Congress of the United States. Two special matters were thoroughly discussed in their various phases, and received the unanimous approval of your committee and the conference. The first dealt with the unification of medical practice acts in the several states and territories, and showed a consensus of opinion that medical education and requirements should be raised to a given standard, said standard being adopted by the several states, thereby permitting mutual acceptance of medical licenses to practice. To this end the following resolution of Dr. John B. Roberts, of Philadelphia, was adopted:

Resolved, That the chairman appoint a sub-committee of three to study the question of uniform medical legislation on the basis of uniform medical education, and that this sub-committee report at the next meeting of this conference.

The chairman, Dr. Johnson, appointed Drs. Emil Amberg, of Detroit, Mich., Dudley S. Reynolds, of Louisville, Ky., and John B. Roberts, of Philadelphia, Pa. The other matter, of probably greater magnitude, at least from a legislative point of view, was the importance and absolute necessity of state medical organization in connection with the American Medical Association, through your Committee on National Legislation. The universal opinion of the delegates in conference was that the medical societies should be thoroughly organized throughout each State and have a principal representative through whom the entire regular profession of the state should be brought promptly in touch with your Committee on National Legislation, the American Medical Association, the National Congress, or a State Legislature whenever necessity requires. To this end, the following resolution of Dr. William H. Welch, of Baltimore, Md., was adopted:

Resolved, That the chairman of this conference send to each state society a communication, stating the character of the organization, and the purpose of this conference, advising each society to conform with the action of the American Medical Association, requesting the appointment of two members, as delegate and alternate, a State Committee on National Legislation to represent the State Society in this conference, and to co-operate with the National Committee. Each state society is requested to send to the Chairman of the National Committee, the names and addresses of the delegate and alternate.

To further carry out this important matter of state medical organization, the following motion of Dr. H. M. Bracken, of Minneapolis, Minn., was adopted: *Moved*, That a committee of five, with power to increase its number, be appointed by the chairman, to carry into effect state medical organization. The Chairman, Dr. Johnson, appointed Drs. C. R. Shinault, of

Helena, Ark., W. P. Goff, of Clarksburg, W. Va., L. B. Tuckerman, of Cleveland, Ohio, H. M. Bracken, of Minneapolis, Minn., and Charles E. Quimby, of New York City, N. Y.

We quote and reiterate our recommendation of last year, and we can not urge too forcibly its importance in connection with the future efforts of your committee. "Your committee is of the opinion that an annual conference at Washington, D.C., to consider pending national and state medical legislation, is desirable, in that it will tend to awaken interest in national medical affairs and will give the state and national legislators a medium for better understanding the wishes of the country at large with respect to medical questions. We recommend that the American Medical Association request affiliating medical societies of the several states and territories to provide in their constitutions for the appointment of a State Legislative Committee whose duty it shall be to consider all medical legislation arising in the state legislatures and in the national congress, and advise their constituent members thereof; further, the appointment of one member and an alternate to represent their society when called upon by your Committee on National Legislation to a general conference in Washington, each society paying out of its treasury the expenses of such delegate or alternate to said conference. We suggest that such committee shall be carefully selected with respect to special individual qualifications for such service, and that the tenure of office shall depend upon individual fitness for the position."

We officially report that on Feb. 20 and 21 of this year, in accordance with the constitution of the American Medical Association, your Committee on National Legislation held an annual conference at Washington, D.C., with the delegates from the medical societies of the various states, and the government services. We submit herewith the transactions of said conference, and recommend that it be printed in full in THE JOURNAL. We further recommend that the American Medical Association approve the several resolutions quoted and adopted by the second annual conference. Very respectfully,

H. L. E. JOHNSON, M.D.,
WILLIAM H. WELCH, M.D.,
WILLIAM L. RODMAN, M.D.,
Committee on National Legislation.

Minutes of the Second Annual Conference of the Committee on National Legislation, Held at Washington, D. C., February 20-21, 1901.

The Committee on National Legislation had several meetings during the year, and the Chairman was instructed to send the following communication to the Secretary of the Medical Societies of each State and Territory of the United States, in accordance with the by-law of the American Medical Association:

WASHINGTON, D. C., December 28, 1900.

MY DEAR DOCTOR:

On behalf of the Committee on National Legislation of the American Medical Association, I earnestly request you to send, at your earliest opportunity, the names and addresses of the delegate and alternate who are to represent your State Medical Society at the annual conference at Washington, D. C., this winter.

When you furnish me the names I will notify them at once of the date of the proposed conference. Please refer to the report of the last conference, which appears in the JOURNAL of June 16, 1900, page 1547, and the report of the Trustees, on page 1559; also the report of the General Executive Committee of the Association, on page 1561, JOURNAL of same date. Respectfully,

H. L. E. JOHNSON, M.D.,
Chairman.

Subsequently, to those societies who did not respond, the following communications were sent:

WASHINGTON, D. C., January 23, 1901.

MY DEAR DOCTOR:

On behalf of the Committee on National Legislation of the American Medical Association, I earnestly request you to send, at your earliest opportunity the names and addresses of the delegate and alternate who are to represent your State Medical Society at the annual conference at Washington, subject to the call of the Association's Chairman.

Please refer to the report of the last conference, which appears in the JOURNAL of June 16, 1900, page 1547, and report of the Trustees on page 1559, and also report of General Executive Committee on page 1561, JOURNAL of same date. If your State Society has not appointed a delegate and alternate will you please urge upon the members the importance of so doing? Respectfully,

H. L. E. JOHNSON, M.D.,
Chairman.

WASHINGTON, D. C., January 23, 1901.

DEAR DOCTOR:

As your Society has not sent the name of the delegate and alternate to the Annual Conference of the Committee on National Legislation of the American Medical Association which meets here on February 20 and 21, 1901, will you please send the enclosed to the proper appointing officer or Committee of your Society that it may promptly reach your delegate or alternate, when such appointment is made? Very truly yours,

H. L. E. JOHNSON, M.D.,
Chairman Committee on National Legislation.

Following thereon a regular call for meeting was sent.

WASHINGTON, D. C., January 30, 1901.

DEAR DOCTOR:

The Committee on National Legislation of the American Medical Association hereby requests you to meet in annual conference at Washington, D. C., on February 20 and 21, 1901, at 11 o'clock a. m., at the Arlington hotel, to consider various medical matters now pending in the National Congress of the United States and any other medical matters of local interest to your Society.

All the hotels of the city are crowded at this season of the year, but the proprietor of the Arlington Hotel, Mr. Frank V. Bennett, will provide for your room and comfort either there or at an annex on your arrival.

Please notify me by mail promptly that you will be present at this conference. I leave Washington on the 1st proximo to attend the third Pan-American Medical Congress at Havana, Cuba, and expect to return to Washington by the 12th or 15th, at which dates any correspondence from you will be promptly answered.

In case you cannot attend please forward this to your alternate.

Very truly yours,
H. L. E. JOHNSON, M.D.,
Chairman Committee on National Legislation.

The conference was called to order by the Chairman, Dr. H. L. E. Johnson, of Washington, D. C., at 11:20 a. m., February 20, 1901, at the Arlington Hotel. The minutes of the last conference were read and approved.

PRESENT: Dr. Dudley S. Reynolds, Louisville, Ky.; Dr. Emil Amberg, Detroit, Mich.; Dr. Charles E. Quimby, New York, N. Y.; Dr. H. M. Bracken, Minneapolis, Minn.; Dr. C. S. Rodman, Waterbury, Conn.; Dr. W. P. Goff, Clarksburg, W. Va.; Dr. L. B. Tuckerman, Cleveland, Ohio; Dr. C. R. Shinault, Helena, Ark.; Dr. U. O. B. Wingate, Milwaukee, Wis.; Dr. Walter Wyman, Surgeon-General United States Marine-Hospital Service; Dr. Henry A. Beaudoux, Fargo, N. D.; Dr. H. L. E. Johnson, Washington, D. C.; Dr. George S. Armstrong, Spokane, Wash.; Dr. John B. Roberts, Philadelphia, Pa.; Dr. William H. Welch, Baltimore, Maryland; Dr. J. B. Massie, Houston, Tex.; Dr. Wm. L. Rodman, Philadelphia, Pa.; Dr. George M. Sternberg, Surgeon-General, United States Army.

The Chairman, Dr. Johnson, announced that the medical societies of the following States had nominated delegates, but their representatives had not appeared: Colorado, Florida, Indiana, Kansas, Maine, New Hampshire, Rhode Island, Tennessee; and that the medical societies of the following States had made no nominations to the conference: Alabama, Arizona, California, Delaware, Georgia, Idaho, Illinois, Indian Territory, Iowa, Louisiana, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, North Carolina, Oklahoma Territory, Oregon, South Carolina, Utah, Vermont, Virginia, Wyoming. The Massachusetts Medical Society sent the following communication, declining to send a delegate, and voting to lay the matter upon the table:

THE MASSACHUSETTS MEDICAL SOCIETY.

ROXBURY, MASS., February 25, 1901.

H. L. E. JOHNSON, M.D.
Chairman Committee on National Legislation, American Medical Association.

MY DEAR DOCTOR:

In reply to your communication of 23d instant I would say that on or about the 7th instant I wrote to inform you that at a meeting of the Councillors of this Society, held on 6th instant, it was voted to lay on the table the matter of appointing a delegate to represent the Massachusetts Medical Society at the meeting of the Committee in Washington, D. C. Yours Respectfully,

F. W. GOSS,
Recording Secretary.

The Chairman, Dr. Johnson, addressed the conference, stating the object of the call, and outlined the work of the Committee *ad interim*, stating that after the first conference adjourned the special committee, consisting of Drs. H. L. E. Johnson, Washington, D. C.; W. P. Goff, West Virginia; H. M. Bracken, Minnesota, and L. B. Tuckerman, Ohio, as directed, drew up a preamble to the Senate and House of Representatives denouncing in positive terms, and urging against the passage of Senate Bill 34, known as the Antivivisection Bill, and had the same submitted to the Senate by the President *pro tempore*, Senator Frye. The bill is practically dead. We have heard nothing about it recently, and its former urgent supporters appear to have lost heart, at all events they are not pushing the matter.

Many of those who signed the original petition for the passage of the bill, have concluded the measure was too radical. We think the conference is to be congratulated upon its success in this particular. Following the instruction of the last conference, your committee called upon the different committees of Congress, in the interest of the other measures, endorsed by you.

The Chairman, Dr. Johnson, presented the following resolution, which was proposed at the meeting of the American Medical Association, at Atlantic City, June, 1900, and referred to the Committee on National Legislation, which decided to refer it to you for your consideration:

Resolved, That this Association heartily endorses the bill (H. R. 11019) now before Congress, providing that the rank, pay and allowances of the Surgeon-General of the United States Army shall be that of a Major-General of the United States Army, and that a committee of three be appointed by the President to assist in the securement of its passage.

On motion this resolution was endorsed,

J. LAWTON MIERS, M.D.
I. N. LOVE, M.D.
JOSEPH M. MATHEWS, M.D.

The Chairman stated that in December last, the Committee on National Legislation was appealed to by many prominent physicians to co-operate with them, in urging an amendment to Senate Bill 4300, known as "the Army Reorganization Bill." The amendment proposed was to section 18, and referred to the medical department of the Army.

Your Committee saw the Chairman in charge of the matter in the House of Representatives, presented their objections to the measure, and later, arranged with the Chairman of the Senate Committee on

Military Affairs for a hearing. This was promptly agreed to by the Chairman, Senator Hawley, but subsequently this hearing was positively refused, the Chairman of the Committee sending the following letter to your Chairman:

UNITED STATES SENATE,
COMMITTEE ON MILITARY AFFAIRS,
CITY OF WASHINGTON, December 15, 1900.

Mr. H. L. E. JOHNSON, Chairman
American Medical Association, Washington, D. C.

MY DEAR SIR:

Personally I should be very glad to hear you as a representative of the Medical Association; but the committee has determined to stop taking testimony because we have had a flood of it, and we are anxious lest we shall be late in passing the reorganization bill and bring calamity upon our people in the Philippines. Our good friend, Surgeon-General Sternberg, has spoken to the committee and talked as long as he pleased. I think the committee understands pretty well the real needs of the staff corps. Yours very truly,

J. R. HAWLEY.

Upon receipt of this, your Chairman called upon several members of this Senate Committee, objecting positively to their course in this matter, and sent to the Chairman the following communication:

WASHINGTON, D. C., December 16, 1900.

Hon. JAMES R. HAWLEY, Chairman
Senate Committee Military Affairs.

DEAR SIR:

Your favor of the 15th instant, in which you decline giving further public hearing in the matter of the Army bill, S. 4300, has been received, and in reply thereto, I beg to say:

We, the Committee on National Legislation, which represents the American Medical Association, and each State and Territory Medical Society of the United States, do most respectfully, but earnestly, disapprove section 18 of said bill as reported by the House of Representatives, and request that the following be substituted therefor:

SEC. 18. That the Medical Department shall hereafter consist of one surgeon-general with the rank of brigadier-general; ten surgeons with the rank of colonel; twenty surgeons with the rank of lieutenant-colonel; eighty surgeons with the rank of major; two hundred surgeons with the rank, pay, and allowances of first lieutenant of cavalry for the first five years' service, and with the rank, pay, and allowances of captain of cavalry after five years' service; the Hospital Corps as now authorized by law, and the Nurse Corps: *Provided*, That all vacancies in the grade of colonel, lieutenant-colonel and major, created or caused by this section shall be filled by promotion according to seniority, subject to the examinations now prescribed by law, and that all vacancies in the grade of surgeon with the rank of lieutenant shall be filled by selection after competitive examination: *Provided*, That the period during which any surgeon shall have served as a surgeon or assistant-surgeon of volunteers, or as a surgeon under contract, since April twenty-first, eighteen hundred and ninety-eight, shall be counted as a portion of the five years' service required to entitle him to the rank of captain, but that after he attains the rank of captain his relative rank for subsequent promotion shall not be disturbed by anything herein. That on and after the passage of this Act the President may appoint, for duty in the Philippine Islands, fifty surgeons of volunteers with the rank, pay, and allowances of major, one hundred and fifty surgeons of volunteers with the rank, pay, and allowances of captain of cavalry: *Provided*, That so many of these volunteer medical officers as are not required shall be honorably discharged from the service whenever in the opinion of the Secretary of War their services are no longer necessary, and that the period for which they are appointed shall be limited to two years from the passage of this Act. That on and after the passage of this Act the President may appoint contract surgeons who have rendered faithful and satisfactory services for a year or more to be surgeons of volunteers with the rank, pay, and allowances of first lieutenants of cavalry, subject to honorable discharge whenever in the opinion of the Secretary of War their services are no longer required: *Provided further*, That all surgeons appointed shall be of good moral character and shall have passed a satisfactory professional and physical examination.

This request is made in the interest of the Medical Department of the Army and the Civilian Medical profession of the United States. As you find it impossible to grant us the audience promised, we respectfully request that this communication be laid before your Honorable Committee for consideration.

Very respectfully yours,

H. L. E. JOHNSON, M.D.,
Chairman Committee on National Legislation,
American Medical Association.

Following the receipt of the above, your Chairman was promptly invited to appear before the Committee on Military Affairs of the Senate, and requested to explain the amendment suggested by your Committee. After an hour's conference and argument with the Committee, notwithstanding the fact that the matter had been practically closed, in recognition of your wishes the amendment to section 18, proposed by your committee, was referred to a special sub-committee of their members for consideration, who finally reported against the same. In order to reinforce the position taken by your Committee, your Chairman telegraphed the various members of the conference, and THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION as follows:

December 18, 1900.

Dr. ————:

As Legislative Delegate, from your State Society, wire at once Senator Hawley to vote for amendment to pending Senate Army Bill 4300, proposed by Committee on National Legislation.

H. L. E. JOHNSON, M.D., Chairman.

CHICAGO, ILL., Dec. 18, 1900.

EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

The Committee on National Legislation has been in conference with the Military Committees of the Senate and House of Representatives, considering the Army Reorganization Bill (S. 4300), and has recommended a substitute for Medical Section 18, to meet the wishes of the civilian physicians of the United States and the Surgeon-General of the Army. The Committee on National Legislation appeals to every member of the American Medical Association, requesting that he write or telegraph at once, to both Chairmen, Senator Hawley and Representative Hull, urging them to vote for, and favor the passage of the substitute proposed by your Committee. The original bill is highly objectionable.

H. L. E. JOHNSON, M.D.,
Chairman Committee on National Legislation.

This situation made us thoroughly appreciate the absolute necessity of thorough organization in the various States. We recommend a most thorough organization in the medical societies in the several States, so that your committee, *ad interim*, will be enabled to call upon some duly appointed individual, who will be able to bring the pressure of the entire medical profession of his State, to act for, or against, a measure in Congress when called upon by your committee. Many letters were received in reply to the telegrams of your chairman, one of which, from Dr. Black, is herewith presented, as it is in line with our suggestions:

ILLINOIS STATE MEDICAL SOCIETY.

JACKSONVILLE, ILL., February 13, 1901.

H. L. E. JOHNSON, M.D., Washington, D. C.,
Chairman Committee on National Legislation, American Medical Association.

DEAR DOCTOR:

As Chairman of the Committee on Medical Legislation of the Illinois Medical Society, I have been appointed to represent Illinois at the proposed meeting in Washington on the 20th and 21st of the present month.

I regret to say that it will be impossible for me to attend this meeting without there should be some radical change in my arrangements. In Illinois we are devoting our greatest energy towards organizing. Whatever influence we may be able to exert on legislation must come by an organized effort.

The Legislative Committee is using every means to secure a correct list of the members of all local societies in the State. In Illinois our local societies comprise at least four thousand members. We hope to soon have these men in a closer and more uniform organization, and by that means will be able to bring far more influence to bear on National as well as State legislation. Anything that I can do from this distance to forward the interests of your committee will be gladly undertaken.

Regretting my probable inability to attend your meeting, I am,

Very respectfully,

CARL E. BLACK, Chairman.

It seems to me that this is the secret of the success of this Conference—thorough organization. When you leave Washington and your committee, we are willing at all times to come to the aid of the physicians of the various States, but we must have some person appointed in each State to reach the various physicians in his individual State, so that they can correspond with their Members and Senators, expressing their wishes on a particular subject. Medical legislation has often been proposed by laymen, objectionable to the doctors, and medical men, comprising the cream of the profession, have objected to the measures, but no attention was paid to their wishes. The other day when a question came up in Congress about a particular clause in a certain bill, it was stated that Workingmen's Union, No. so-and-so, had drawn the bill, through their attorneys, and that it would undoubtedly pass. It seems to your committee that our profession should be given some recognition. If the members present will act on this, and appoint some man in each State, we can do more in the future. With respect to the Army Bill, Senate 4300, it has passed out of our hands, and is now a law. I want to call to your attention the article by Dr. Amberg, "The Present Status of Interstate Reciprocity, concerning licenses to practice medicine" (*Medical News*, October 27, 1900), which is very important and shows a great deal of work and thought on his part.

This practically sums up the work, *ad interim*, with the exception that at the last Congress we acted on Senate Bill 4171, which is herewith presented:

56th Congress, 1st Session. S. 4171. Report No. 1833.

IN THE HOUSE OF REPRESENTATIVES.

May 28, 1900.

Referred to the Committee on Interstate and Foreign Commerce.

May 29, 1900.

Referred to the House Calendar and ordered to be printed.

AN ACT

To amend "An Act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service," approved February fifteenth, eighteen hundred and ninety-three.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That an Act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service, approved February fifteenth, eighteen hundred and ninety-three, be amended by addition of the following sections:

"SEC. 10. That the Supervising Surgeon-General, with the approval of the Secretary of the Treasury, is authorized to designate and mark the boundaries of the quarantine grounds and quarantine anchorages for vessels which are reserved for use at each United States quarantine station; and any vessel or officer of any vessels or other person, other than State or municipal health or quarantine officers, trespassing or otherwise entering upon such grounds or anchorages in disregard of the quarantine rules and regulations, or without permission of the officer in charge of such station, shall be deemed guilty of a misdemeanor and subject to arrest, and upon conviction thereof be punished by a fine of not more than three hundred dollars or imprisonment for not more than one year, or both, in the discretion of the court. Any master or owner of any vessel, or any person violating any provision of this Act or any rule or regulation made in accordance with this Act, relating to inspection of vessels or relating to the prevention of the introduction of contagious or infectious diseases, or any master, owner or agent of any vessel making a false statement relative to the sanitary condition of said vessel or its contents or as to the health of any passenger or person thereon, shall be deemed guilty of a misdemeanor and subject to arrest, and upon

conviction thereof be punished by a fine of not more than five hundred dollars or imprisonment for not more than one year, or both, in the discretion of the court.

"SEC. 11. That any vessel sailing from any foreign port without the bill of health required by section two of this Act, and arriving within the limits of any collection district of the United States, and not entering or attempting to enter any port of the United States, shall be subject to such quarantine measures as shall be prescribed by regulations of the Secretary of the Treasury, and the cost of such measures shall be a lien on said vessel, to be recovered by proceedings in the proper district court of the United States and in the manner set forth above as regards vessels from foreign ports without bills of health and entering any port of the United States.

"SEC. 12. That the medical officers of the United States, duly clothed with authority to act as quarantine officers at any port or place within the United States, and when performing the said duties, are hereby authorized to take declarations and administer oaths in matters pertaining to the administration of the quarantine laws and regulations of the United States."

Passed the Senate May 26, 1900.

Attest: CHARLES G. BENNETT, Secretary.

56th Congress, 1st Session. HOUSE OF REPRESENTATIVES. Report No. 1833.

GRANTING ADDITIONAL POWERS, ETC., UPON MARINE-HOSPITAL SERVICE.

May 29, 1900.—Referred to the House Calendar and ordered to be printed.

Mr. Corliss, from the Committee on Interstate and Foreign Commerce, submitted the following

REPORT.

[To accompany S. 4171.]

The Committee on Interstate and Foreign Commerce, to whom was referred the bill (S. 4171) to amend "An act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service," approved February 15, 1893, beg leave to submit that this measure is necessary for the efficient performance of the duties devolving upon the Marine-Hospital Service.

We therefore recommend that the said bill do pass.

* * * * * * *

The Chairman, Dr. JOHNSON, continuing, said: This bill is now on the verge of passage. General Wyman will fully explain the features and necessity of this measure, and then we can close up the work, *ad interim*, and take up general matters, by States.

GENERAL WYMAN, U. S. Marine-Hospital Service: This bill was introduced in the Senate and House, and came up before the Senate Committee with some amendments and was by them reported favorably, and then it passed the Senate. It then went over to the House Committee, by whom it was reported favorably and placed on the Calendar. On account of the shortness of time remaining of this session an effort was made to gain unanimous consent to have the bill passed in one of the morning hours. There was no objection to the bill, but the gentleman who brought it up had inquired about it from one of the members who knew nothing about it, and he was a little tart in his reply, and in consequence he said: "I object." This prevented it from being brought up at that time. I have seen the Chairman of the Committee, and spoken to him of the importance of this bill, and urged him to put it through. I received a nice letter from him in reply, in which he said he would do so.

It had been reported favorably to the House by the committee, and the chairman of the committee has the privilege, by vote of the committee, to bring any matter up at the proper time whenever an opportunity is given to report bills. Mr. Hepburn said he would bring it up at the proper time. Another way is under the suspension of the rules. Last Monday was one of these days, and Mr. Corliss made a report; but the measure of the World's Fair at St. Louis was up, and there was no time then to take up our matter. Mr. Corliss will watch it closely and pass it, because there will be no objection.

The National Quarantine law passed in 1893 is a fine law, but the only penalty for a foreign ship leaving a port without a bill of health is through a court of law.

If the master of the ship says there is no one sick and there is some one sick, we have no way of punishing him for it. Heretofore we have been obliged to use the State quarantine laws for punishment, but we cannot do it as effectively under them as we could under our own. The penalties are not excessive, but there should be some penalty which would cause the master and officers of vessels to respect the law. The importance of it now lies in the fact that Congress passed laws granting additional quarantine powers to Hawaii and Porto Rico, and our own country should have the same, so that we may have some way of protecting ourselves from the introduction of contagious diseases. These laws are made to apply in the Philippines and Cuba. While the penalties might not be imposed, yet if we had the power of inflicting them it would be a great aid.

Another feature is for the National quarantine officers to administer oaths. Every State has this power, but we have not. One other feature relates to the surveillance of vessels that may leave foreign countries, such as Cuba, and hover around our coast claiming they don't enter our ports; they come within the 3-mile limit and we have no way of preventing them. They call themselves fishing smacks, and are often manned by new arrivals from Spain who are not immune. They come to the Florida coast for the purpose of smuggling tobacco and rum, and all we can do is to drive them off. We purchased a swift yacht and cruised along the coast to ward them away from the 3-mile limit. We have to put aboard a customs inspector. This law empowers the Secretary to make such regulations as will keep the coast safe from such vessels and not allow them to put a sick man ashore, and charge all expense against the vessel, which we would seize and transport to the nearest quarantine station for disinfection, the vessel paying all expenses.

Another feature of the bill is to make out the anchorage so that any intrusion may be punishable by a fine. Infected vessels are placed within this anchorage, and should any vessel try to have communication with the infected ship we can drive them off or capture them. This bill will give us the necessary authority to impose a fine upon them. Everything is smooth, and the only thing now is to get it through. The chairman of our committee and Mr. Corliss are quite interested in it, but of course the time is getting short; but if the committee could interest the speaker and get him to recognize some one in the interest of this bill it will pass at once, and I think this can be done with some tact.

DR. TUCKERMAN, of Ohio, then moved that the special committee be authorized to represent to the members of the House Committee who have this bill in charge the urgent necessity of getting this bill through. Seconded by Dr. Goff, of West Virginia. Carried.

The Chairman, Dr. JOHNSON, suggested that they individually bring this matter to the attention of their Senators and Members, when they are seen this afternoon.

The Chairman, DR. JOHNSON, said it might be well for the Conference to pass on the *ad interim* action of the committee.

DR. JOHN B. ROBERTS, of Pennsylvania, moved that the Conference approve the action *ad interim* of the Legislative Committee of the AMERICAN MEDICAL ASSOCIATION and its subcommittee. Seconded by General Wyman. Carried.

The Chairman, DR. JOHNSON, on behalf of the Medical Society of the District of Columbia, extended an invitation to the members of the Conference to attend its evening meeting.

GENERAL WYMAN: It has occurred to me since sitting here that it might interest you to come to the Bureau and Laboratory of the Marine-Hospital Service. It will give me great pleasure to have you attend.

The Chairman, DR. JOHNSON, then called the delegates by states, for any matter they might wish to present the Conference.

DR. C. R. SHINAULT, of Arkansas, said he had nothing special to report.

DR. C. S. RODMAN, of Connecticut, had no business to introduce. He said: I may report from Connecticut that in consequence of the meeting here a year ago the Connecticut Medical Society introduced a recommendation to provide for reciprocity and, perhaps what is inseparable for a State Board, that a practitioner may have his license revoked on conviction of crime. This was introduced in the Connecticut Legislature last week, and we hope to have it passed. If so, it will be the result of your meeting last year. From my own experience, a larger representation might be gotten here if the President of each State Society was notified and the matter brought to his attention.

The Chairman, DR. JOHNSON, for the District of Columbia, said: We have several matters pending; the principal one is the reclamation of the Anacostia flats. This is a disease-breeding spot which affects the health of those in the public schools, Insane Asylum, Navy Yard, Arsenal, and the entire southeastern section of this city. Another matter is the water supply and filtration. The Potomac water here is the worst in the United States. We also have the bill, which has already been referred to, granting additional quarantine powers to the Marine-Hospital Service, and I urge that this be considered. All these things have been placed before the House and Senate and shifted from committee to committee because of our nonentity in Congress. We have a foothold on the Rivers and Harbors Bill. The water supply should be considered at once. We have possibly more typhoid fever here than in any other city in the United States.

DR. DUDLEY S. REYNOLDS, of Kentucky: I had not the privilege of being with you last year. I have learned a great deal since I came here, and I see now more fully the value of this committee, and when I return home I will endeavor to present a synopsis of the work to our State Society in May in Louisville. I know of nothing that Kentucky has to request.

DR. W. H. WELCH, of Maryland: I was not instructed to bring any special matter before the Conference. Apropos of your remarks, Mr. Chairman, on organization, I might say that our Society has appointed two delegates to represent them in this Conference, and it might be useful for this Conference to prepare a statement to be sent to each society to appoint two of their members who can be appealed to at any time.

DR. REYNOLDS, of Kentucky: A great many State societies have no knowledge of this committee and its possibilities, and if a brief statement was prepared, giving the nature of the organization, it would do much good. Not only should each society be requested to appoint two members as a committee, but it is also important that the chairman of this committee communicate with them. Each society should also report at this Conference as to their legislative work, and communicate with this Conference as to what they desire brought forward.

GENERAL WYMAN: Shall these two appointees be delegate and alternate?

DR. WELCH, of Maryland: Yes. If they could not attend, appoint a proxy, and bring this to the attention of each Society at their annual meeting.

RESOLUTION OF DR. WELCH.

I move that the Chairman of this Committee send to each State Medical Society a communication stating the character of the organization and the purposes of this Conference, and advising each Society to conform with the action of the AMERICAN MEDICAL ASSOCIATION, requesting the appointment of two members as a State committee on national legislation to represent the State Society in this Conference and to coöperate with the National Committee. Each State Society is requested to send to the Chairman of the National Committee the names and addresses of the local committee.

DR. REYNOLDS, of Kentucky: I would suggest that a subcommittee draft a report of the request.

DR. QUIMBY, of New York: Would it not be better for the societies to comply with the regulation?

DR. TUCKERMAN, of Ohio: The necessity of doing it now rests on the fact that a number of State societies meet before the AMERICAN MEDICAL ASSOCIATION meeting, and if they are communicated with now they will act this coming spring.

DR. REYNOLDS, of Kentucky: The idea I have about this resolution is, that it intends to notify these States which have not been informed that the AMERICAN MEDICAL ASSOCIATION invites each State Society to appoint a delegate and alternate.

DR. H. M. BRACKEN, of Minnesota: Mr. Chairman, who has provided for the alternate in the various States? In our State I was informed that no alternate was requested. These matters can be made clear to us now.

The Chairman, DR. JOHNSON, submitted a copy of the letter sent to each Society, and stated that each State and Territory Society had been communicated with, both this and last year.

The Chairman, DR. JOHNSON: Dr. Welch's resolution is in order.

The resolution was stated and carried.

DR. EMIL AMBERG, of Michigan: I should like to bring up the subject of interstate reciprocity. It appears to me that this subject is not entirely within the scope of this Committee, because this has more to do with interstate legislation. It is my opinion that the AMERICAN MEDICAL ASSOCIATION should appoint a special committee for this purpose. This requires study of the preliminary and medical education and the laws of each State, and I would therefore move that the AMERICAN MEDICAL ASSOCIATION, not appreciating fully the importance of this movement at its last meeting, the following resolution be adopted:

WHEREAS, The medical profession of the United States desires uniform medical legislation on the basis of uniform medical education, and

WHEREAS, The AMERICAN MEDICAL ASSOCIATION is the main representative of the medical profession of this country.

I move that the Legislative Conference of the AMERICAN MEDICAL ASSOCIATION, and affiliated societies recommend to the AMERICAN MEDICAL ASSOCIATION, at its next meeting at St. Paul, that the Association appoint a committee of three, which committee shall study the question of uniform medical legislation on the basis of uniform medical education, and that this committee report at the meeting of the Association in 1902, and that the actual expenses of this committee, not exceeding $600 for one year, be paid by the Association.

Seconded by Dr. Shinault, of Arkansas.

DR. JOHN B. ROBERTS, of Pennsylvania: I think if any legislative work is to be done, this Conference is the place, and far better than creating another committee, with other expenses, to do the same work we are doing now.

The Chairman, DR. JOHNSON: The matter of incurring extra expense to the AMERICAN MEDICAL ASSOCIATION would be referred to the Board of Trustees for approval. We could appoint from this Conference a committee and present it to the AMERICAN MEDICAL ASSOCIATION for its approval.

DR. JOHN B. ROBERTS, of Pennsylvania, offered the following amendment to Dr. Amberg's resolution:

Resolved, That the Chairman appoint a sub-committee of three to study the question of uniform medical legislation, on the basis of uniform medical education, and that this sub-committee report at the next meeting of this Conference. Dr. Amberg accepts Dr. Roberts' amendment, which, on motion, was carried.

DR. AMBERG, of Michigan: Something should be done on this matter at the next meeting of the AMERICAN MEDICAL ASSOCIATION.

The Chairman, DR. JOHNSON: In this matter we of the District of Columbia are annoyed. We have Maryland on one side and Virginia on the other, and we cannot practice in either place without examination, nor can they come here to practice.

DR. REYNOLDS, of Kentucky: Dr. Amberg is anxious for the AMERICAN MEDICAL ASSOCIATION to be heard throughout the country on this subject, and it will be met entirely by the amendment offered by Dr. Roberts. What we do here we report at the next meeting at St. Paul, that goes into the minutes of the AMERICAN MEDICAL ASSOCIATION, and if they approve of what we have done, that is then the expression of the AMERICAN MEDICAL ASSOCIATION itself.

The Chairman, DR. JOHNSON: The AMERICAN MEDICAL ASSOCIATION has already gone on record as requiring a four years' course in medicine before one can become a member of the AMERICAN MEDICAL ASSOCIATION, if they graduated after a certain date. What we want is a uniform requirement in granting license.

DR. REYNOLDS, of Kentucky: Yesterday, in this room, there was a conference of the Association of American Medical Colleges; this matter was considered and a conclusion reached which will give great impetus to the movement.

DR. AMBERG, of Michigan, moved as follows:

I move that the Chairman of the Conference be instructed to inform, in future, all members of the committee at least two months in advance about the principal features which will come up for consideration at the meeting and which are known to him at that date, and later on those which present themselves, until the date of the meeting.

Seconded by Dr. H. A. Beaudoux, of North Dakota.

The Chairman, DR. JOHNSON, informed the Conference that the motion is unnecessary and unwise, as certain important matters might come up after the notifications are sent out.

Dr. Amberg withdrew his motion.

DR. H. M. BRACKEN, of Minnesota, had nothing at present to report. The State Association is in sympathy with this work so far as it understands it. Bearing on the action upon Dr. Welch's resolution, I spoke to him about it, and his idea is that of a principal and alternate. I think it should be so expressed in notifying each Society.

The Chairman, DR. JOHNSON: Will Dr. Welch please explain his resolution?

DR. WELCH, of Maryland: One the delegate, the other alternate.

The Chairman, DR. JOHNSON: By unanimous consent, the change is made in the resolution of Dr. Welch.

DR. C. E. QUIMBY, of New York: I have no special report to make because this appointment was made rather suddenly. Therefore there is nothing to request in the direction of legislation from New York. We have in New York the typical organization. It is really Dr. F. H. Wiggin to whom the credit is due for having put the association where it now stands. The essence of that force lies in the basic principle of its organization, which is absolute equality for every part of the State, and the State Association is the County Association, and these are the State Associations. We have a council which is elected by the branches. It is divided into district branches. Of course there are a number of counties that have no association. These apply to the district branches. There is therefore a provision made for every man to be a member of the State Association and then the AMERICAN MEDICAL ASSOCIATION. There is one delegate for every ten members. These are the delegates to the AMERICAN MEDICAL ASSOCIATION. This authority lies with the County Association. The right of entrance is also decided by the County Association, so that the men among whom he lives decide as to his fitness for membership. The County Association Treasurer collects dues for his association. The State Association fixes its dues, and each County Association fixes its own. The necessity of these district branches will not appear in any other State as in New York.

The State Association was very slack for a time. There were five associations when the new charter was granted. Now these county associations are being formed at the rate of one a week. I have heard of three in the last ten days. It is spreading, and in New York they are rushing to come in out of the rain. The candidates elected at each meeting number from 10 to 25. I think the most satisfactory part of the report is in its influence on members in showing them a unified body with the authority among themselves. There has been nothing in New York within twenty years which has done as this has. The only committees are an executive and a legislative committee. The County Association rules on all legal matters of ethics. The County Association committees are all made subordinate to the State Association. So we are prepared to carry on organization. We have all our committees ready and are a perfectly organized body, not only in numbers, but in the character of the men who are coming in.

DR. H. A. BEAUDOUX, of North Dakota, had nothing to bring before this body. We have troubles of our own in our State. We have taken steps to close the back door and are doing it successfully. We expect to succeed in bringing about clean medical practice in our State and stop magnetic institutions and quacks.

DR. C. R. SHINAULT, of Arkansas: When my name was called before I did not know what to say or what was wanted. I had no instructions from my society. We are in sympathy with this Conference, and we want our medical law improved. There is a bill before our Legislature now to that effect. At present the only restriction we have is a board that is empowered to examine applicants and decide as to their abilities as practitioners. There are several counties that do not have three graduates. This bill calls for the appointment of two members from each Congressional district, which will constitute the examining board and board of health. We hope then to have better laws. The board now passe any one who has weight as a voter.

DR. L. B. TUCKERMAN, of Ohio: We have in our State enforced the medical examination law for the first time, and it has resulted in a very great thinning out of incompetents. Nearly 30 per cent. failed. The State Board did not enforce its full requirements, but we think it will next year. The State Society endorsed fully the action of the Conference here. There is one matter which concerns the AMERICAN MEDICAL ASSOCIATION, and it seems to me we might act on it here because during the next year, if this proviso passes, it will cost the AMERICAN MEDICAL ASSOCIATION to mail its journal about $30,000. There was a commission appointed to codify the postal laws and some things were added. The daily papers have had it in for weekly papers for years. They tried to shut out the weeklies, but it was discovered in time and stopped. In Section 150 of H. R. 13423 we find "that the rate of postage on newspapers and periodicals not exceeding two ounces in weight, when the same are deposited in a letter carrier office, for delivery by its carriers, shall be uniform at 1 cent each; and periodicals weighing more than two ounces shall be subject, when delivered by such carriers, to a postage of 2 cents each, and these rates shall be fully prepaid by stamps affixed." If this proviso passes, the AMERICAN MEDICAL ASSOCIATION will be obliged to affix a 2 cent stamp to each copy that goes to a subscriber. If this were a necessity it would be all right, but when the Government has to pay the railroads nearly four times as much per ton more than the express companies pay, it is liable to shut out from the denizens of country districts all literary work, because subscribers will be required to pay from $1 to $1.50 more per year. I therefore move that we take immediate action in this matter.

Seconded by DR. WELCH, of Maryland.

Carried.

DR. REYNOLDS, of Kentucky: I would suggest that Dr. Tuckerman appear before the Senate Committee, and that he be authorized to use any expression as the sentiment of this body.

The suggestion was approved.

DR. JOHN B. ROBERTS, of Pennsylvania: We received the reports and adopted the suggestions of the AMERICAN MEDICAL ASSOCIATION. We have nothing special to present, but I feel sure that the want felt is some reciprocity clause. The delegate from Arkansas (Dr. Shinault) also says that this is desired. We should give the right to practice to those who deserve it.

DR. GEORGE S. ARMSTRONG, of Washington: I have nothing to report. We have a permanent committee on legislation, and as soon as the legislators are elected we get the names of all members and the doctors who have a pull with them, and when we want anything done we notify those doctors having a pull: they interview the legislators, and the bill passes. Our Members and Senators will vote for anything we like.

DR. L. B. TUCKERMAN, of Ohio: I hope everyone here will see his Senators and Representatives before we go home and speak about the things we will act on here. The committee will not have half the effect that the home doctor has.

DR. WILLIAM P. GOFF, of West Virginia: I have no special subject to report. Our State Society is thoroughly in sympathy with the Conference. Our society appoints a delegate yearly, but takes no further interest in the matter:

DR. U. O. B. WINGATE, of Wisconsin: I have nothing to report, except that our society is in thorough harmony with this Conference, and that at its last meeting it amended its constitution to create a committee of one to meet with this Conference, and also to consider reciprocity.

GENERAL WYMAN, U. S. Marine-Hospital Service: I have nothing to report beyond what I have already said.

DR. D. S. REYNOLDS, of Kentucky: This is a luxurious semi-senatorial body. We meet here at 11 o'clock. I have very important demands at home, and wish to give my vote to Dr. Tuckerman.

Before I leave the city I will address a communication to Senator Lindsay, of Kentucky, in reference to the postal law bill.

DR. L. B. TUCKERMAN, of Ohio: I move that to-morrow the first business will be the discussion of the details of the Army Bill and the matters which the Committee on National Legislation presented. I would be glad if General Sternberg could go over the matter with us. I want to give notice to Congress that a lay Secretary, who don't know a bacillus from a bedbug, has no business to sit down upon the medical profession in the way he has. Seconded by Dr. Beaudoux, of North Dakota. Carried.

DR. D. S. REYNOLDS, of Kentucky: I move that the Chairman of this Committee furnish each of the delegates to this conference with a copy of these proceedings within thirty days. Seconded by Dr. W. P. Goff, of West Virginia. Carried.

DR. C. S. RODMAN, of Connecticut: In the matter of sending of delegates, I have had a double experience, in securing a delegate and then coming myself. I am satisfied that two or three things should be provided. First, each state should be asked to pay the expenses of the delegate, and second, to select an alternate. It would be much better, I think, for each delegate to select his own alternate. The Society cannot depend on the alternate, if the delegate cannot attend. I found it quite a task to get a man to come here for me. I certainly think that the State Society should be asked to provide for an alternate, but that the delegate should select him, and that the State Society should be asked to pay the expenses. The President should be notified a month before the meeting of his State Society. At the annual meeting of the Connecticut State Society held last May, I do not believe there was a man in attendance who was aware of the fact that the AMERICAN MEDICAL ASSOCIATION provides for the expenses of delegates. Therefore I wish to emphasize it.

The Chairman, DR. JOHNSON: A copy of the transactions was sent to the delegate who represented your Society last year, and was published in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Consequently all concerned should have been thoroughly informed on these matters. The AMERICAN MEDICAL ASSOCIATION does not provide for the expenses of State delegates—that is a mistake.

DR. H. A. BEAUDOUX, of North Dakota: I move we accept the invitation of General Wyman for 9 o'clock to-morrow morning, and from there proceed here, to meet at 11 o'clock. Motion carried.

A motion to adjourn was made and carried.

SECOND DAY, THURSDAY, FEBRUARY 21, 1901.

The Chairman, DR. JOHNSON, called the meeting to order at 11:10 a. m., and announced that the first order of business was the consideration of the law, formerly known as Senate 4300, the Army Reorganization Bill.

DR. L. B. TUCKERMAN, of Ohio: I went up yesterday to the document room of the House and Senate and tried to get the full history of the bill. I got the bill as passed. I have a few copies of these, but the things that were knocked out I haven't got. I presume the best way to proceed would be for General Sternberg to explain to us about the things that got in that should not have, and about the things that did not that should have been added.

SURGEON-GENERAL STERNBERG, U. S. Army: In making my recommendation for an increased medical department, I asked for one I thought we should have for the size of our army, and this draft of my recommendation shows what I asked for. I may say here that for an army of 100,000 men the surgeon-general should have the rank of major-general. I shall be retired a year from next June, so I don't expect to get it, but my successor undoubtedly will. You can't get everything from Congress at once. Instead of giving us ten assistant surgeons-general, with the rank of colonel, they gave us eight. Instead of twenty deputy surgeons-general, with rank of lieutenant-colonel, they gave us ten. Instead of giving us eighty surgeons, with rank of major, they gave us sixty; and instead of two hundred assistant surgeons, with rank of captains and first lieutenants, they gave us two hundred and forty. They gave us forty more. They gave us about the same number all the way through, although they gave us more of the latter grade. This is bad politics on the part of Congress and something the medical profession should stand up against a little later. The fact is that the bill as passed has not done injustice to anyone. It promoted two lieutenant-colonels to be colonels, four majors to be lieutenant-colonels, and it promoted fourteen captains to be majors, and promoted the men below them. It did no injustice to anyone now in the service. It appoints a larger number of assistant-surgeons, who will not have the same opportunity for promotion. It is these men who are coming in now who will suffer. They will be captains in five years, that is the law. But his promotion to a majority will be slow. A man now gets to be a major in fifteen to eighteen years. The man who comes in now will have to serve twenty-five years or more before he attains his majority. This should be corrected by legislation. I presented the matter in the most forcible way to Congress, and we are on record as claiming this. If Congress gives this to us, the medical corps will not have suffered. Their estimate was for an army of 60,000 and not for the necessary estimate I prepared for the existing army of 100,000 men. This bill includes two hundred officers to serve two years. They would not give us the number of officers in the regular Army that I wanted. I then made a special claim for two hundred officers of volunteers, fifty as majors and one hundred and fifty captains. This has passed, and it will help us out for two years. At the end of these two years they go out because their time expires, and then we must have some additional legislation to increase the number of men in the regular army. This, then, is the time to strike for an increase in the corps, before the men go out. We must then again present the plea for more men in the higher grades. We have really no reason to abuse Congress. They have provided for our present needs. They have also authorized the appointment of as many contract surgeons as I require. I made an earnest effort to obtain volunteer commissions for the contract surgeons. I urged that all contract surgeons who have rendered satisfactory service for one year should be commissioned, but they did not put this in the bill. So we have gotten nothing for our deserving contract surgeons. We must still retain a great many contract surgeons in the service. Whatever defects there are in the bill as passed don't really do any injustice to the present men of the corps, and these defects can be remedied later. So we must not urge additional legislation now, but in a year or two this matter should again be taken up. Say at you next annual meeting it should be taken up by the profession. There was great urgency to get this bill through. If I had called upon the profession to block legislation until we could get what we wanted, it would have resulted in our getting nothing, so let it rest until later.

DR. L. B. TUCKERMAN, of Ohio: I would inquire of the Surgeon-General if by the next annual Conference there could be a bill prepared embodying what would be an ideal medical service in the Army.

SURGEON-GENERAL STERNBERG: Yes, this could be done. It could be best prepared in my office.

DR. L. B. TUCKERMAN, of Ohio: I move that this Conference request the Surgeon-General, as a member of this Conference, to prepare a bill creating an ideal medical service, with the provision that the Surgeon-General shall have the rank of Major-General. Seconded by Dr. William L. Rodman, of Pennsylvania. Carried.

SURGEON-GENERAL STERNBERG, U. S. A.: I would like to add that I was not so greatly disappointed that Congress did not give us a larger medical corps for this reason: If you have to get hastily three or four hundred additional men, you are not sure of getting the best; so, in the long run, it won't take long to fill the 130 vacancies which they have given us.

The Chairman, DR. JOHNSON: In behalf of the Army Reorganization Bill, which is now known as Public No. 30, approved February 2, 1901, I wish to say I appeared before the Senate Committee with the Surgeon-General. I presented the letter, a copy of which I had read here yesterday, making a request to them to grant us a hearing, and accept a substitute for Section 18. A hearing was given; but they did not accept our suggestions. I think, while it is very well to act on the advice of the Surgeon-General, it behooves this Conference to stamp that bill as not in accord with the wishes of the medical profession at large. We speak in behalf of the medical men of the country who differ from the men from West Point and Annapolis. We present ourselves for medical appointment, thoroughly equipped to master the situation before us; but this is ignored. This Conference should go on record as disapproving the Senate's action in ignoring the wishes of the medical men of this country. This will pave the way for a future consideration of this subject. If deferred, it will come up later as new matter, before new men, who know nothing about its history. This communication should be sent to the Chairman of the Military Committee of the House and Senate, and let them understand that we don't approve their action. Notwithstanding the amount of work the Surgeon-General and I had before this committee, we and you have been ignored completely.

Dr. L. B. TUCKERMAN, of Ohio: I move that the Chairman (Dr. Johnson) and Dr. Welch be empowered to draw up a suitable communication to Congress, stating our views on their ignoring the medical profession of the United States, and give them notice that they will hear from us later. Seconded by Dr. C. S. Rodman, of Connecticut.

The Chairman, Dr. JOHNSON: This will have more weight if drawn up by members from the States, because those of us who reside in the District have no vote; let us all sign, and then it will have still more weight. I think Dr. Tuckerman would be the man to draw up the communication.

Dr. C. E. QUIMBY, of New York: If this motion prevails I must oppose it on the grounds of politics. I am not versed in politics, but in New York we learn that when you are beaten, don't call the other man names. The men on that committee were as sincere in doing their duty as we were in doing ours. The Surgeon-General says they have done us no injustice. He also says, this matter can be remedied later. It would be wiser for us to say to those men that at a future time we will be allowed to explain more clearly, and that they will then agree with us. I oppose the sending to any committee in Congress a communication condemning their action, because it did not agree with us.

SURGEON-GENERAL STERNBERG, U. S. A.: Our recommendations are a matter of record, and as a matter of fact, the resolutions would be pigeonholed, and it would do no good, even though it might be some satisfaction to us. Let us be satisfied and take up the matter later *de novo*. They are not sure in their own minds how many troops they must have in the Philippines. If they provide it for 100,000 and the number required was only 50,000, they would have done an unwise thing. They provide it for the immediate necessities, and I think it well to start in on the campaign now. Moreover, when we are demanding legislation, this Conference should have its delegates on the spot to urge the matter, and present our views. This Conference won't be able to accomplish any great results unless it gets at them from behind. Each man should see his own Senator and Representative. As a matter of practical politics it is hardly worth while to pass this resolution.

Dr. Tuckerman withdrew his motion.

The Chairman, Dr. JOHNSON: This demonstrates the necessity of thorough organization in the States, so that we can come in contact with the radicals of the State Societies.

SURGEON-GENERAL STERNBERG, U. S. A.: I would like to say in this connection, impressing upon all Congressmen and Senators the fact that medical men now have a very extensive education. After graduating from some college, they have four years at a medical college, and at least one year at some hospital, and these men cannot be induced to come into the Army without promotion.

Senator Proctor says, "you get to be a first lieutenant right away, and the West Point man is only a second lieutenant." The West Point man goes in there, when a mere boy, and has not such an extensive education. I endeavored to bring this fact before the committee, but it had no weight with them. The committee could not recommend more than they could pass. We must educate the individual members of the committee to understand this, and I think we will get all we expect at some future time.

The Chairman, Dr. JOHNSON: The next matter for consideration is the codification of the postal laws, as applied to our medical JOURNAL.

Dr. L. B. TUCKERMAN, of Ohio: After adjournment yesterday I went to the Senate, with a letter to Senator Lindsay, of Kentucky, from Dr. Reynolds. I pointed out to him the clause which related to medical journals, and other periodicals. He took it to Senator Chandler, who said the bill would not go through with that proviso—we can be positively assured that it will not go through that way.

Incidentally, I want to emphasize the remarks of General Sternberg. The only way to secure legislation is for each one of us to see our Senator and Representative personally. We thought we were beaten in Ohio. The osteopaths had secured, by treating legislators' wives, the support of one of the members of the State Senate, and it looked as though he had a majority of the votes, and he could bring it up at any time. We called up his family physician, who took the first train for his home. They had lunch together, during which they had a heart-to-heart talk. He said to the legislator, "Thomas, you want to go to Congress? If you bring up this bill there are eighteen votes against you." Thomas dropped the bill. The purpose of this organization is to get a firm grip on every Congressman's appendix. I think if we carry it to the States and organize on the New York plan, in five years we can bring from any district enough pressure to bear on each Congressman.

Dr. C. R. SHINAULT, of Arkansas: I saw Senator Berry and two Congressmen. Senator Berry gave me his assurance that he would help us. He was very submissive, and he said he was at our mercy, and would grant anything we wanted.

Dr. C. E. QUIMBY, of New York: I saw Senator Depew and had the Postal Bill in my hand, and had gotten nearly through the formal greeting, when he took the bill, glanced at it, and threw it down, saying: "That will never pass."

Dr. EMIL AMBERG, of Michigan: I wish to say that Senator McMillan expressed himself in the same terms as Senator Depew with reference to the Postal Bill.

GENERAL STERNBERG: With reference to antivivisection legislation, this has been killed for the present. If it is ever revived we should protest against it.

Dr. L. B. TUCKERMAN, of Ohio: In reference to Senate Bill 4171, I saw my Representative, and called his attention to the importance of it, and telegraphed to my home, and had them wire Chairman Hepburn, to push it along. This bill should pass this Congress, as we may have an epidemic of yellow fever this summer.

The Chairman, DR. JOHNSON: This bill has already passed the Senate and is waiting in the House for final action.

SURGEON-GENERAL WYMAN, U. S. M.-H. S.: There are two ways in which this bill can come up. The chairman of the committee has the privilege of presenting to the House on his committee day such measure as he chooses, and he assures me that he will get it through. There is no objection to it on the part of anybody. It can be put through when there is a call of committees. There is a morning hour once a week on Mondays or on suspension day, when a motion can be made to suspend the rules, and put the bill through. On this day the speaker must recognize some one who will move that this bill do pass. On account of the St. Louis World's Fair project, Mr. Corliss could not get recognition.

Dr. C. E. QUIMBY, of New York: What provision is made for watching, recognizing and following bills of interest to the medical profession?

The Chairman, Dr. JOHNSON: Our committee, the Committee on National Legislation, looks after all such bills.

Dr. JOHN B. ROBERTS, of Pennsylvania: I should like to have some provision made for a permanent secretary to this committee.

The Chairman, Dr. JOHNSON: This is already provided for.

The Chairman, Dr. JOHNSON: Yesterday there was a resolution passed directing the Chairman to appoint a committee on uniform medical legislation, etc. The Chair appoints Drs. Amberg, Reynolds and Roberts.

The Chairman, Dr. JOHNSON: I think we would be very remiss if we did not appoint a Committee on State Organization. This committee should devise some way of reaching the voters. I would suggest that a committee of three be appointed for this purpose.

Dr. L. B. TUCKERMAN, of Ohio: Would it not be better to recommend that the American Medical Association appoint a committee for this purpose?

The Chairman, Dr. JOHNSON: That would be very unwise. The American Medical Association has done all it ought to do; it has appointed a permanent committee on legislation and provided for an annual conference. We should appoint some of our members to confer with the States, so that they can discuss the matter in the various sections of the country.

Dr. H. M. BRACKEN, of Minnesota: I move that a committee of five, with power to increase its number, be appointed by the Chairman, to carry into effect state medical organization. Seconded by Dr. H. A. Beaudoux, of North Dakota. Carried.

Dr. H. M. BRACKEN, of Minnesota: What have we to do so far as appointing our chairman is concerned?

The Chairman, Dr. JOHNSON: Nothing. The appointment is provided for by the American Medical Association.

Dr. L. B. TUCKERMAN, of Ohio: I would move you that the committee of the American Medical Association, on national legislation, shall represent the annual legislative conference, and shall act *ad interim*, and that due notice of the meetings thereof shall be published in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Seconded by Dr. W. P. Goff, of West Virginia. Carried.

The Chairman, DR. JOHNSON: The Committee on National Legislation is empowered to act *ad interim* for the American Medical Association. It will now, also, act for the conference.

Dr. H. A. BEAUDOUX, of North Dakota: This committee of three is appointed for one year only; therefore I move that it be appointed for all time to come, for the reason that you are thoroughly conversant with the work.

The Chairman, Dr. JOHNSON: While we have worked faithfully last year, and this, we might not do so next year. One cannot be lazy on this committee. We have already served two years. There is a large amount of work for this committee to do.

Dr. H. A. BEAUDOUX, of North Dakota: I move that this conference recommend to the American Medical Association a three-year term for this committee instead of one. Seconded by Dr. L. B. Tuckerman, of Ohio.

The Chairman, Dr. JOHNSON: This, if proposed, will lie over to be acted upon next year, as it is an amendment to the Constitution.

Dr. W. H. WELCH, of Maryland: The American Medical Association appoints a number of committees. This is the prerogative of the president. I ask that we do not ask for a longer term than the law allows.

Dr. C. E. QUIMBY, of New York: It strikes me that if we let the matter rest, we shall accomplish what we want, and men by their good work will come forward. We would have influence with the President, and can call his attention to them.

The Chairman, Dr. JOHNSON: When this matter comes up between the Trustees and Executive Committee, and they wish to make the terms of this committee three years, I shall oppose it, for I believe a committee should not be foisted upon the American Medical Association for more than one year. When a committee does good work the Association may want them to serve longer.

Dr. H. M. BRACKEN, of Minnesota: Let us leave it alone. The committee shall be made up from Maryland, Pennsylvania and Washington, D. C.

Dr. WILLIAM L. RODMAN, of Pennsylvania: As a member of this committee, I think it should be left as it is now. The President of the American Medical Association should appoint whom he desires.

Dr. H. A. Beaudoux, of North Dakota, withdrew his motion.

Dr. L. B. TUCKERMAN, of Ohio: I move this conference appoint a committee of one to urge on Congress the immediate passage of S. 4171 passed by the Senate and now pending in the House. It should be passed at this session, because the dangers from the loopholes in the present law will menace us materially before another Congress can meet. Seconded by Dr. C. R. Shinault, of Arkansas. Carried.

The Chairman, Dr. JOHNSON, appoints Dr. L. B. Tuckerman, of Ohio, as this committee of one.

Dr. C. R. SHINAULT, of Arkansas: The Southern Congressmen, as a rule, are all favorable to the bill. They realize that summer is coming and the country is in danger.

The Chairman, Dr. JOHNSON: I would suggest that all the members see their Senators and Representatives in the interest of this bill.

Dr. W. P. GOFF, of West Virginia: I think the committee on organization is a very important one. The different State Societies appoint a number of delegates, and take it as a matter of course. If this matter of State organization is gotten at in the proper way it will make the State Societies treat this matter in a different manner. Those who don't might not be in sympathy with this conference.

Dr. C. E. QUIMBY, of New York: Is it not possible to do this work in one day? We come here for business and not for pleasure, and we can get to work early in the morning of the first day and have the afternoon for pleasure, and in the evening another session, and thus complete the work in one day.

Dr. L. B. TUCKERMAN, of Ohio: It seems to me that the present system is about as good as we can do. We got together and cleared up the business yesterday; went to Congress, and came back and had a session to-day, and have now cleared up the balance of the business. By putting in one more day, those of us whom it takes more than one day to get here, might not be able to accomplish our mission.

Dr. C. R. SHINAULT, of Arkansas: It will be time enough to consider this at our next meeting, and then we will probably have to have more than two days on account of the length of business.

The Chairman, Dr. JOHNSON: When the two days' session was decided upon by our committee it was arranged that during the first day of the session we would complete as much work as possible, and go to Congress on the same day, and close up all business on the following day. We could have our meetings earlier in the morning. I don't think it wise to have a one-day conference. We could not accomplish much.

Dr. H. M. BRACKEN, of Minnesota: If we had a night session, we could not leave the city until the next morning. Would it not be possible to have the meetings earlier in the season?

The Chairman, Dr. JOHNSON: The object of having the meeting now, was because the new session of Congress began in December, and to call us together simply for the Army Bill would have been unwise, so we decided to call it when it was deemed most advantageous. The next Congress, a long session, will do much work in the summer, and we might meet in December although we are empowered to meet but once in each year. I think it will be wise to leave to the judgment of the committee when to call the next meeting. It would be well for the delegates to send us word when they can most conveniently attend.

Dr. H. M. Bracken, of Minnesota, suggested the middle of January.

Dr. W. P. GOFF, of West Virginia: I move that a vote of thanks be extended to the Chairman for his great interest in this work.

Seconded by Dr. L. B. Tuckerman, of Ohio.

The Chairman, Dr. JOHNSON: I had rather this be given to the committee. We have labored equally.

The motion was put and carried.

The Chairman, Dr. JOHNSON: The Chair appoints as the Committee on State Organization, Dr. C. R. Shinault, of Helena, Ark.; Dr. W. P. Goff, of Clarksburg, W. Va.; Dr. L. B. Tuckerman, of Cleveland, Ohio; Dr. H. M. Bracken, of Minneapolis, Minn., and Dr. Chas. E. Quimby, of New York City. The committee has power to increase its number.

On motion the conference adjourned to meet at the call of the Chairman.

The following letter was presented by Dr. Tuckerman to the chairman of the Committee on Interstate and Foreign Commerce, in the House, and National Quarantine and Public Health, in the Senate, and a personal interview obtained with each committee.

WASHINGTON, D. C., February 21, 1901.

At the annual meeting of the National Legislative Conference of the American Medical Association and Affiliated State Medical Societies held at the Arlington, February 20-21, the following resolution was adopted, and Dr. L. B. Tuckerman, of Cleveland, Ohio, was appointed a special committee to present the same to the committee of the House. The resolution is as follows: *Resolved*, That this Conference urge the immediate passage of S. 4171, which has already passed the Senate and is now pending in the House for the reason that the dangerous loopholes in the present quarantine law will occasion a serious menace to the public health before another Congress can meet. Respectfully,

H. L. E. JOHNSON, M.D., Chairman.

The Chairman has the pleasure of congratulating the Conference, and announcing the passage of bill S. 4171, to amend "an Act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service." This bill is now a law and is known as Public No. 141, approved March 3, 1901.

H. L. E. JOHNSON, M.D., Chairman.

On motion of Dr. Emil Mayer, New York, the report of the Committee on National Legislation was referred to the General Executive Committee.

The President called for the reading of the report of the Committee on Reorganization, when Dr. Connell, Pennsylvania, moved that the report be read by title and referred to the Nominating Committee. Seconded. It was then moved and seconded that the motion of Dr. Connell be laid on the table, which was carried. Dr. McCormack then read the report of the Committee on Reorganization.

Report of Committee on Reorganization.

Officers and Members of The American Medical Association: We, your Committee on Reorganization, respectfully submit the following:

We have keenly felt from the first the magnitude of the task set for us, but in all the months of exacting labor, we have been spurred on by the hope that our work would, if wisely performed, and if accepted by you, mark the dawn of a new era in the history of American medicine. After full consideration of the problems before us we early reached the conclusion that it would be useless at this late date to suggest the adoption of either half-way or compromise measures, and, therefore, we have prepared and now submit a completely revised Constitution and By-Laws designed to federate all the state organizations into this Association, to foster scientific medicine, and to make the medical profession a power in the social and political life of the Republic.

In a recent issue of THE JOURNAL we submitted for your consideration a full outline of the changes proposed and, in an exhaustive manner, presented the reasons for our recommendations. We earnestly request that every member of the Association shall, before passing judgment upon our work, carefully consider all the facts and arguments presented. Such examination will make it clear that we have been conservative, suggesting only such changes in the organic laws as are essential to the accomplishment of the high purpose for which the Association was organized.

It will be seen that we have left the Code of Ethics, based upon the original resolution of adoption, undisturbed and still in force. We have carefully preserved the membership of all those now in the Association, and have jealously guarded the rights and privileges of each state organization now in affiliation with this body.

In accordance with your instructions we have also submitted to the larger Committee, composed of one member from each state, a detailed scheme for the organization or reorganization of state and county societies, in harmony with, and in completion of the general plan, in which we ask your concurrence.

The various portions of the scheme of organization proposed are inter-dependent and should be permitted to stand or fall together. During the time devoted to the preparation of the report, we have considered the various questions in detail, and have rejected many propositions that we at first thought worthy of adoption, so that we feel that no amendment can be proposed from the floor which has not already been fully considered. We appreciate the fact that some of the details proposed are to a certain extent experimental, and their true value can only be determined by the test of experience.

As all the changes outlined, and the reasons for them, have been fully placed before you, no discussion of any part of them will be attempted here, the Constitution and By-Laws clear and distinct in every provision, being submitted as our unanimous report.

Respectfully,

J. N. MCCORMACK,
P. MAXWELL FOSHAY,
GEORGE H. SIMMONS,
Committee on Reorganization.

At its conclusion, Dr. Harris, New York, speaking in behalf of the delegation of the New York State Medical Association, which had unanimously endorsed the general plan reported by the committee, offered the following resolution:

Resolved, That the report of the Committee on Reorganization be referred to a Joint Committee composed of the General Executive Committee and the Enlarged Committee on Reorganization (representing as it does all the states); and that this Joint Committee meet at the rooms of the General Executive Committee, at the Hotel Ryan, during the afternoon and evening, to give a hearing to any member who desires to be heard on the subject of this report; and that this Joint Committee be requested to report to-morrow morning.

After presenting the resolution, he moved its adoption, which was seconded and carried.

At this point some confusion arose as to what disposition had been made of the report.

The President stated that the report had been referred to a joint committee composed of the General Executive Committee and the Enlarged Committee on Reorganization.

Dr. Baldy, Pennsylvania, moved a reconsideration of the action taken by the Association in referring the report to the General Executive Committee, etc. This motion was seconded.

Dr. Harris, New York, thereupon moved that the motion of Dr. Baldy to reconsider be laid on the table, which was seconded and carried.

Dr. Baldy then stated that the Chair had no right, according to parliamentary law, to recognize a motion to table a motion of reconsideration, and he therefore appealed from the decision of the Chair.

The Association sustained the Chair in his ruling.

Dr. Happel, Tennessee, made the point that when a motion to table a motion to reconsider was made and carried, it prevented the Association from taking any further action upon the matter for that day, according to parliamentary law.

This report was submitted to a committee composed of one representative from each State, Territory and Government Service at a meeting held at the Hotel Ryan, June 3, 1901.

This committee, after regularly organizing, considered the Constitution and By-Laws as submitted, section by section, and unanimously recommend it for adoption by this Association. The following states were represented. The names of their representatives are appended, and submitted herewith. [The states and representatives are given on next page.]

On motion, the Association adjourned until Wednesday.

JUNE 5.—SECOND GENERAL SESSION.

The Association met at 11 a. m., and was called to order by the President.

The President introduced His Excellency, S. R. Van Sant, Governor of Minnesota, who welcomed the Association on behalf of the state.

Address of the Governor.

Mr. President, Ladies and Gentlemen: A welcome is none the less cordial because it is twenty-four hours late. Age improves some things, particularly in the medical profession. I have been associated with doctors and have worn their badges from time to time, and I have attended their banquets, and I confess to you that I am pretty near out of ammunition. I have said all of the good things I can say about your splendid profession. I have for a long time been interested in the work of the medical profession. I have done all I could for you and am ever willing to advance your interests. I am not going to talk to you this morning about medicine. I don't know any more about that subject than you do yourselves. (Laughter.)

We are somewhat proud of our University and of the medical profession of the great state of Minnesota. You can scarcely realize what a great state you have come to. This state is so large that it would take a great many states of the size of Rhode Island to fill it, and then there would be lots of territory left. We have here great wheat fields; we grind the wheat into flour and feed the world. We will send to other states 20,000,000 tons of iron ore, and will have enough left for the next 250 years.

I would call your attention to the beautiful and peerless women we have in this state; also we have the bravest men that can be found anywhere, and I think you will agree with me on the first proposition before you leave our beautiful city and state.

As I was entering the hall this morning, I noticed a reference to your next place of meeting. The notice stated that the convention should go south in 1902 and the reasons for it were given. I want to say a word or two along that line. I was one of the members who opposed the Grand Army of the Republic going south in 1895. I thought it ought to go to a northern city, but I want to say to you, that I am glad now that the Grand Army of the Republic crossed the Ohio river

and met in the beautiful city of Louisville. We received a cordial welcome to that city. They received us with open arms, and I never saw more patriotism to the square inch than in that city. The old flag greeted us on every hand. It was placed on public buildings, on churches and private residences, and the word "Welcome" was written everywhere. I shall never forget the sight I saw under the glare of the electric lights of the red, white and blue. There was one sign which pleased me very much. It was written in very large letters over the jail, "Welcome." (Laughter.) I want to say to you that when we heard that you were going to meet in St. Paul we tore our jail down (laughter), and we can not give you a welcome in that place, and we don't want to do so.

Here the governor spoke of the beauties of the south and referred to the monuments that were erected to distinguished men. He concluded his remarks by saying: "I sometimes think doctors have special privileges. This is hardly fair in a republic like ours. For instance, if I treat you, I pay the bill. If the doctor treats me or my family, I pay the bill still. (Laughter.) I do not know whether it is a good wish to make to a body of doctors or not, but it is a good thing for a lot of politicians. That wish is this: "I don't know what you want, but I hope you will all get it." (Applause.)

Following the address of welcome by the governor the minutes of the previous general session were approved as read.

The next order was the report of the Joint Committee, consisting of the General Executive Committee and the Committee on Organization upon the report of the Committee on Reorganization. This report was read by the Chairman of the Joint Committee, Dr. H. O. Walker, Michigan.

Report of the Transactions of the Reorganization Committee on Revision of Constitution and By-Laws.

The Committee on Organization of the Constitution and By-Laws of the American Medical Association met in Parlor Four of the Hotel Ryan, St. Paul, Minn., at 11 a. m., June 3, 1901, and were called to order by Dr. McCormack, of Kentucky, Chairman of the Special Committee on Reorganization. Dr. G. N. Kreider, of Illinois, was elected chairman, and Dr. H. M. McClanahan, of Nebraska, elected Secretary. On request of the Chairman, Dr. McCormack stated the object of the meeting was set forth in the following resolutions passed at the 1900 meeting of the American Medical Association:

Resolved, That a committee be appointed by the Association on the organization of the profession throughout the United States to coöperate with the Committee on National Legislation; this Committee to consist of one member from each State and Territory represented in the Association.

Resolved, That a committee of three be appointed by the President to prepare plans in detail for such Committee on Organization, to enter into correspondence with the officers of the various State societies, and take such action in the premises as it may think advisable, and that the Trustees be requested to appropriate a sum not exceeding $150 for the necessary expenses of the Committee.

After briefly calling attention to many of the inconsistencies and the cumbersome condition of the present constitution, he submitted for the consideration of the members of the Organization Committee a printed copy of the results of the Special Committee on Reorganization and asked its indulgence in giving a careful examination. It was moved and seconded that the report of the Special Committee on Reorganization be accepted for consideration, which was carried, and a copy placed in the hands of its members. On motion of Dr. R. E. Conniff, of Iowa, the meeting then adjourned until 2 p. m.

PARLOR 4, HOTEL RYAN, ST. PAUL, MINN., JUNE 3, 1901.

The Committee on Organization was called to order by the Chairman, and in the absence of its Secretary, Dr. R. Harvey Reed, of Wyoming, was elected Secretary, and, in pursuance of its action at the morning session, the Committee on Organization proceeded to consider the proposed Constitution and By-Laws, section by section. After a full consideration of each section, the following proposed Constitution and By-Laws were unanimously adopted, section at a time, then adopted as a whole, after which they were duly signed by the members present or their authorized proxies. There being no other business before the Committee, a motion to adjourn was carried.

R. HARVEY REED, Secretary.

Approved: GEO. N. KREIDER, Chairman.

We, the undersigned, have examined and hereby indorse and approve of the revised constitution for the American Medical Association:

Drs. G. W. Harrison, Alabama; J. A. Dibrell, Arkansas; John L. Wills, California; W. W. Grant, Colorado; G. A. Shelton, Connecticut; John Palmer, Jr., Delaware; Wm. N. Fisher, District of Columbia; G. N. Kreider, Illinois; G. W. McCaskey, Indiana; R. E. Conniff, Iowa; Joseph M. Mathews, Kentucky; Alonzo Garcelon, Maine; H. O. Marcy, Massachusetts; A. W. Alvord, Michigan; J. N. Griffith, Missouri; H. M. McClanahan, Nebraska; H. D. Didima, New York; Geo. Cook, New Hampshire; Philip Marvel, New Jersey; John A. Wyeth, New York; W. J. Means, Ohio; J. A. Crook, Tennessee; J. W. Aird, Utah; G. T. Vaughn, U. S. Marine-Hospital Service; Charles Richard, U. S. Army; T. L. Catterson, Washington; A. H. Thayer, West Virginia; J. H. Pritchard, Wisconsin; R. Harvey Reed, Wyoming.

Constitution.

ARTICLE I.—TITLE OF THE ASSOCIATION.

The name and title of this organization shall be THE AMERICAN MEDICAL ASSOCIATION.

ARTICLE II.—OBJECT OF THE ASSOCIATION.

The object of this Association shall be to federate into one compact organization the medical profession of the United States, for the purpose of fostering the growth and diffusion of medical knowledge, of promoting friendly intercourse among American physicians, of safeguarding the material interests of the medical profession, of elevating the standard of medical education, of securing the enactment and enforcement of medical laws, of enlightening and directing public opinion in regard to the broad problems of state medicine, and of representing to the world the practical accomplishments of scientific medicine.

ARTICLE III.—COMPOSITION OF THE ASSOCIATION.

SECTION 1.—This Association shall consist of Delegates, Permanent Members, Members by Invitation, Honorary Members, and Associate Members.

SEC. 2. *Permanent Members.*—Permanent members shall consist of such members of the state societies, together with their affiliated local societies, entitled to representation in this Association as shall make application for admission, in writing to the Treasurer, and accompany said application with a certificate of good standing signed by the president and secretary of the society of which they are members, and the annual fee.

SEC. 3. *Members by Invitation.*—Members by invitation shall consist of distinguished physicians of foreign countries who may be invited by the officers of Sections or of the Association. They shall hold their connection with this Association until the close of the annual session to which they are invited, and shall be entitled to participate in all of its affairs, as in the case of permanent members, but they shall not be assessed the annual dues.

SEC. 4. *Honorary Members.*—Honorary members shall be physicians of foreign countries who have risen to pre-eminence in the profession of medicine.

SEC. 5. *Associate Members.*—Representative teachers and students of the allied sciences not physicians may become associate members by the vote of the House of Delegates.

ARTICLE IV.—HOUSE OF DELEGATES.

SECTION 1.—The House of Delegates of the AMERICAN MEDICAL ASSOCIATION shall consist of (1) delegates elected by permanently organized state and territorial medical societies in affiliation with this Association; (2) two delegates elected by each of the component Sections of this Association; (3) one delegate each from the medical departments of the U. S. Army and U. S. Navy, and one from the U. S. Marine-Hospital Service.

SEC. 2.—The total membership of the House of Delegates shall not exceed 150, and the delegates representing the state societies shall be apportioned among the several affiliated state and territorial medical organizations in direct ratio to their true membership.

ARTICLE V.—SECTIONS.

In order that its appropriate scientific work may be expeditiously and systematically performed this Association shall be divided into Sections, each of which shall be devoted to the encouragement and pursuit of knowledge in one of the recognized branches into which the science and art of medicine are for convenience divided. New Sections may be organized from time to time as the necessity for their existence arises.

ARTICLE VI.—BRANCHES.

The House of Delegates shall have authority to provide for and create such branch organizations as may be deemed essential to the promotion of the welfare of the medical profession.

ARTICLE VII.—MEETINGS.

The regular meetings of the Association shall be held annually. The place of meeting shall be determined, with the time of meeting for each next successive year, by vote of the House of Delegates.

ARTICLE VIII.—OFFICERS.

SECTION 1.—The officers of this Association shall be a President, four Vice-Presidents, a Secretary, a Treasurer, and nine Trustees.

SEC. 2.—The officers of this Association shall be elected by the House of Delegates.

SEC. 3.—Each officer, with the exception of the Secretary and the Board of Trustees, shall hold office for one year or until his successor is elected and installed. Three trustees shall be elected annually by the House of Delegates for a term of three years.

SEC. 4.—No member of the House of Delegates shall be eligible to any of the offices mentioned in the foregoing sections of this article.

ARTICLE IX.—FUNDS AND APPROPRIATIONS.

Funds for meeting its current expenses and awards from year to year shall be raised by the Association by an equal assessment of not more than ten dollars annually on each of the permanent members; by voluntary contributions for specific objects; and from the profits of its publications. Funds may be appropriated by the House of Delegates in accordance with the articles of incorporation for defraying the expenses of its annual meetings, for publication; for enabling standing committees to fulfil their respective duties, conduct their correspondence, and procure materials necessary for the completion of their stated annual reports; for the encouragement of scientific investigation by prizes and awards of merit; and for defraying the expenses incidental to specific investigation.

ARTICLE X.—REFERENDUM.

SECTION 1.—The General Session shall have the right to discuss questions referred to it by the House of Delegates, and it may, by a two-thirds vote, order a general referendum on any question pending before the House of Delegates.

SEC. 2.—The House of Delegates shall, upon a two-thirds vote of its own members or upon a two-thirds vote of the General Session, submit any question, either through the JOURNAL, or by mail, to the general membership for final vote; and if the persons voting shall comprise a majority of the members, the majority of such votes cast shall determine the question, and shall be binding upon the House of Delegates.

ARTICLE XI.—AMENDMENTS.

The House of Delegates shall have authority to amend any article of this Constitution by a three-fourths vote of all the members composing the House of Delegates, *provided* that such amendment shall have been proposed in open meeting of the House of Delegates one year previous to being acted upon, shall have been published at least three times in THE JOURNAL during the interim, and shall have been officially transmitted to each affiliated state and territorial society for consideration at their annual meetings.

By-Laws.

CHAPTER I.

MEMBERSHIP.

SECTION 1.—No permanent member shall take part in the proceedings of the Association or of any of its Sections, until he has exhibited his credentials to the proper officer or Committee, entered his name and address in full on the registration book and paid his annual dues. He shall also indicate the Section to which he will officially attach himself.

SEC. 2.—Permanent members who have complied with the foregoing regulations shall at all times be entitled to attend the General Sessions and Sections and to participate in the affairs of the Association, so long as they continue to conform to its regulations.

SEC. 3.—No individual who shall be under sentence of expulsion or suspension from an affiliated society of which he may have been a member, or whose name shall have been dropped from the rolls of the same, shall be received as a member or shall be allowed to continue as a member of this Association, until he shall have been relieved from said sentence or disability by such society; nor shall any person not a member of his local medical society be eligible to membership in the AMERICAN MEDICAL ASSOCIATION.

SEC. 4.—Members may vote for Section officers only in that Section with which, upon registration, they have declared their intention of uniting.

SEC. 5.—Any permanent member who shall fail to pay his annual dues for one year, unless absent from the country, shall be dropped from the roll of permanent members, after having been notified by the Secretary of the forfeiture of his membership.

SEC. 6.—Honorary members shall be elected by the House of Delegates on the nomination of a Section, but not more than three Honorary Members shall be elected in any one year.

SEC. 7.—Honorary and Associate Members shall have all the rights of membership except those of voting and holding office. They shall not be assessed for dues, nor shall they be entitled to receive THE JOURNAL free.

SEC. 8.—The House of Delegates shall have authority to provide for membership under proper restriction from among the members of recognized medical societies of neighboring countries, provided that the right of representation in the House of Delegates shall be restricted to affiliated state medical societies in the United States.

CHAPTER II.

GENERAL SESSIONS.

The General Sessions shall include all registered members and delegates, who shall have equal rights to participate in discussions and to vote upon pending questions. Each General Session shall be presided over by the President, or, in his absence or disability, by one of the Vice-Presidents. Before it there shall be delivered upon the opening day of each annual meeting, the address by the President, whose recommendations shall thereupon go to the House of Delegates for action, and on each following session such addresses on scientific subjects as are assigned to orators selected for the purpose. It shall have power to create committees or commissions for scientific work of special interest or importance, and to receive reports of the same, provided that any expense incurred in connection therewith by the Association must first be authorized by concurrent action of the House of Delegates and the Board of Trustees.

CHAPTER III.

HOUSE OF DELEGATES.

SECTION 1.—The House of Delegates, as far as may be consistent with the Articles of Incorporation, shall be the legislative and fiscal body of the Association. Its sessions shall be open to the members of the Association, but except upon invitation of the House of Delegates, they shall have no right to participate in its proceedings.

SEC. 2.—Each state and territorial society entitled to representation shall have the privilege of sending to the Association one delegate for every 500 of its resident regular members, and one for any additional fraction of that number; but each affiliated state and territorial society shall be entitled to at least one delegate.

SEC. 3.—The House of Delegates once in every three years shall appoint a committee of five on reapportionment, of which the President and Secretary shall be members. It shall be the duty of this committee to examine the membership lists of all the affiliated state and territorial medical societies, and to determine therefrom the number of delegates to the Association to which each state or territory shall be entitled for the ensuing three years, beginning with the annual meeting next succeeding that at which the reapportionment is approved by the House of Delegates.

SEC. 4.—Members of the House of Delegates shall be elected for a term of two years, and those state and territorial societies

entitled to more than one representative are requested to so arrange such election that one-half of their delegates, as near as may be, shall be elected each year.

SEC. 5.—In order that each state and territorial medical society may properly provide for a full delegate representation at each meeting of the Association, it shall have the authority to elect alternates, who, upon presentation of the proper credentials, shall be empowered to serve as delegates in the absence of the regularly-elected delegates. Provided that in case of the absence of the regularly appointed delegate or alternate, then the permanent members from that affiliated society, who are present at that meeting, shall select one of their number, who shall represent that society, and provided further, that when only one permanent member is present from any society, that member shall represent that society.

SEC. 6.—No one shall serve as a member of the House of Delegates who has not been a permanent member of the AMERICAN MEDICAL ASSOCIATION for at least two years.

SEC. 7.—Every Delegate from a state or territorial society before being permitted to take part in the proceedings of the House of Delegates must deposit with the Secretary, or other designated officer or committee, a certificate signed by the President and Secretary of the State Society from which he receives his authority, stating that he has been regularly and legally elected a Delegate to the AMERICAN MEDICAL ASSOCIATION for a definitely stated term, and the delegates from the sections shall present credentials signed by the president and secretary of the section they represent. This certificate shall be subject to review by the Judicial Council, and all disputes as to credentials shall be investigated by the Judicial Council and determined by vote of the House of Delegates.

SEC. 8.—The House of Delegates shall approve all memorials and resolutions of whatever character issued in the name of the AMERICAN MEDICAL ASSOCIATION before the same shall become effective.

SEC. 9.—The House of Delegates shall present a summary of its proceedings to the last General Session of each annual meeting of the Association, or it shall publish the same in a bulletin to be issued each day during the annual meeting.

SEC. 10.—A majority of the members composing the House of Delegates shall constitute a quorum for the transaction of business.

CHAPTER IV.

ELECTION AND INSTALLATION OF OFFICERS.

SECTION 1.—All elections shall be by ballot.

SEC. 2.—The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the annual meeting. Only those in attendance at the annual meeting at which the election occurs shall be eligible for election.

SEC. 3.—The officers elected at each annual meeting of the Association shall be installed at the closing General Session.

CHAPTER V.

DUTIES OF OFFICERS.

SECTION 1. *President.*—The President shall preside at the General Sessions and over the House of Delegates, preserve order and decorum in debate, give a casting vote when necessary, and perform all the other duties that custom and parliamentary usage may require. In addition to these duties the President, on the morning of the first day of the annual meeting following his election, shall deliver an address, not exceeding forty minutes in length, upon such matters as he may deem of importance to the Association. He shall discharge such other duties as the Association may impose on him from time to time. He may at any time make such suggestions as he may deem for the best interests of the Association, either to the General Session, or to the House of Delegates, or to any standing or special committee of the Association, provided that said suggestions are submitted in writing. He shall not be eligible for re-election.

SEC. 2. *Vice-Presidents.*—The Vice-Presidents, when called upon, shall assist the President in the performance of his duties, and during his absence, or at the request of the President, one of them shall officiate in his place. In case of the death, resignation, or removal of the President, the vacancy shall be filled by the senior vice-president, beginning with the first. They shall perform all other duties prescribed for that office.

SEC. 3. *Secretary.*—The Secretary shall keep in separate books the minutes of each day's proceedings of the General Session and of the House of Delegates, which minutes shall be read and presented for adoption by the respective bodies. He shall give due notice of the time and place of each next ensuing annual meeting; notify all members of committees of their appointment, and of the duties assigned to them; hold correspondence with other permanently-organized medical societies, both domestic and foreign; and carefully preserve the archives and unpublished transactions of the Association.

It shall also be his duty to verify the credentials of members, to receive and announce all essays and memoirs voluntarily contributed, to determine the order in which such papers are to be read and considered, and to fix a definite hour each day for the general addresses before the Association. He shall prepare for publication the official program of each meeting. It shall be the duty of the Secretary to provide a special registration book for members of the House of Delegates, in which shall be recorded the name of every delegate in attendance at each meeting, together with that of the society which he represents. It shall also be his duty to prepare a roll of delegates attending each annual meeting to facilitate voting by roll-call.

The Editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION shall be Secretary of this Association.

SEC. 4. *Treasurer.*—The Treasurer shall have charge of the funds and property of the Association, and shall pay out its moneys only on the order of the Board of Trustees, properly attested by their respective officers. He shall give to the Board of Trustees bond for the safe keeping and proper use and disposal of his trust, and through the same Board he shall present his accounts, duly authenticated, at every annual meeting of the House of Delegates.

SEC. 5. *Board of Trustees.*—The Board of Trustees shall consist of nine members, three of whom shall be elected annually by the House of Delegates and shall serve for three years. It shall be the duty of this Board to provide and superintend the publication and distribution of all such proceedings, transactions, and memoirs of the Association as may be ordered to be published in such a manner as may be directed, and in doing this it shall have authority to appoint an editor and such assistants as it deems necessary, determine their salaries, and procure and control such materials as may be necessary for the accomplishment of the work assigned to it. Further to facilitate its work, it shall be the duty of the secretaries of the Association and of the several Sections during each annual meeting, or as soon thereafter as practicable, to deliver to the Board, or such editor or agent as it shall appoint, all such records of proceedings, reports, addresses, papers, and other documents as may have been ordered for publication either in the General Sessions, in the House of Delegates, or in the Sections. All moneys received by the Board of Trustees, or its agents, resulting from the discharge of the duties assigned to them, must be paid to the Treasurer of the Association, and all orders on the Treasurer for disbursements of money in any way connected with the work of publication must be endorsed by the President of the Board of Trustees and countersigned by the Secretary thereof. All matters of the Association pertaining to the expenditure of other moneys shall be referred to the Board of Trustees who shall make a report of the same within twenty-four hours after the same are referred to them, and if the House of Delegates orders the expenditure of money in connection with said report, the payment shall be made by the Treasurer as provided above. It shall be the further duty of the said Board of Trustees to hold the official bond of the Treasurer for the faithful execution of his office, to annually audit and authenticate his accounts, and to present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Association during the year, and the amount of all other property belonging to the Association, under its

control, with such suggestions as it may deem necessary. In the event of vacancy of the office of Treasurer, by death or otherwise, the Board of Trustees shall fill the vacancy *ad interim*.

SEC. 6.—All business of each annual meeting shall be completed by the officers who have served through the meeting.

CHAPTER VI.

STANDING COMMITTEES.

The Standing Committees shall be the following:

1. A Committee of Arrangements.
2. A Judicial Council.
3. A Committee on Medical Legislation.
4. A Committee on Nominations.
5. A Committee on Transportation.

And such other Committees as the House of Delegates may create from time to time.

CHAPTER VII.

DUTIES OF COMMITTEES.

SECTION 1. *Committee of Arrangements.*—The Committee of Arrangements shall be appointed by the President, and shall be composed of seven members residing in the place at which the Association is to hold its next annual meeting. It shall be required to provide: 1. A hall for the General Sessions. 2. Halls for the Sections. 3. Rooms for Committees. 4. Rooms for postoffice and the force thereof. 5. Rooms for registration and the force thereof. To meet these expenses the Committee of Arrangements shall have the proceeds of the exhibition hall. This arrangement must be agreed to by the representative of the local committee inviting the Association, before a place for the meeting of the Association is selected by the House of Delegates.

SEC. 2. *Judicial Council.*—The Judicial Council shall be composed of nine members, three of whom shall be chosen annually by the House of Delegates, and shall serve for three years. All questions of a personal character, including complaints, protests, and credentials, shall be referred at once, after the report of the Committee of Arrangements or other presentation, to the Judicial Council without discussion.

The said Council shall organize by choosing a President and Secretary, shall keep a permanent record of its proceedings, and shall report its findings to the House of Delegates at the earliest practicable moment.

SEC. 3. *Committee on Medical Legislation.*—The Committee on Medical Legislation shall consist of one delegate from each state to be appointed annually by the President of the Association. It shall be the duty of this Committee to represent before Congress and elsewhere the wishes of this Association in regard to pending medical and sanitary legislation. It shall be the duty of this committee to consider and act upon all proposed national, state, or local legislation that in any respect bears upon the promotion and preservation of the public health, or upon the material or moral welfare of the medical profession. It shall have power to fill any vacancies that may occur in its membership, and to act *ad interim* when necessity arises.

The Committee on Legislation shall report to the House of Delegates at each annual meeting its action during the previous year, and shall recommend such action regarding pending legislation as it shall deem proper.

SEC. 4. *Committee on Nominations.*—The Committee on Nominations shall consist of nine members, not more than one from one state or territory, selected annually by the House of Delegates. It shall be the duty of this committee, after consultations with the members of the Association, to hold one or more meetings at which the assignment of the offices of the Association for each ensuing year shall be carefully considered. The Committee shall then on the morning of the third day of the annual meeting report the result of its deliberations to the House of Delegates in the shape of a ticket providing one, two, or three names for each office, but not more than one candidate for each office shall be named from any one state or territory. Nothing in this section shall be construed to prevent additional nominations being made by the members of the House of Delegates.

SEC. 5. *Transportation Committee.*—The House of Delegates shall appoint a Committee on Transportation, which Committee shall secure railroad rates for the annual meeting and publish the same in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION sufficiently early to enable all who desire to attend the annual meeting to obtain necessary information.

SEC. 6. *Duties of the Committees.*—The Standing Committees shall discharge all the duties imposed on them by the By-Laws and such other duties as the Association may from time to time direct.

SEC. 7.—The members of the Standing Committees whose appointments are not otherwise provided for shall be selected and appointed by the president of the Association before the adjournment of the annual meeting.

SEC. 8.—The Special Committees shall perform the duties for which they are created, and when the report of a special committee is received and acted on said committee shall cease to exist.

SEC. 9.—All Special Committees shall be appointed by the officer presiding over the meeting at the time the special committee is directed to be constituted. No one appointed on a special committee, who fails to report at the meeting next succeeding the one at which he is appointed, shall be continued on such committee, unless a satisfactory excuse is offered.

SEC. 10.—The House of Delegates shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates, and such Committees shall have the right to report to the House of Delegates in person, and to participate in the debate thereon pending the adoption of such reports; but they shall not have the right to vote.

CHAPTER VIII.

TIME OF SESSIONS.

SECTION 1.—The General Sessions of the AMERICAN MEDICAL ASSOCIATION shall be held at 11 a. m. and 7:30 p. m. of the first day of the annual meeting, at 7:30 p. m. of the two subsequent days, and at 12 noon of the concluding day.

SEC. 2.—The various Sections of the Association shall hold their first session of each annual meeting at 2 p. m. of the first day, and on subsequent days of the annual meeting they shall be in session from 9 a. m. to 12 noon and from 2.30 p. m. to 6 p. m. until their respective programs are completed, or as the Sections themselves may otherwise provide.

SEC 3.—The House of Delegates shall hold its first session of each annual meeting at 2 p. m. of the first day, and on subsequent days at such time as may be necessary to complete its business, provided that it shall not meet at hours that will conflict with the General Session of the Association.

CHAPTER IX.

SECTIONS.

SECTION 1.—The AMERICAN MEDICAL ASSOCIATION shall be divided into the following Sections:

1. Practice of Medicine.
2. Surgery and Anatomy.
3. Obstetrics and Gynecology.
4. Ophthalmology.
5. Laryngology, Otology and Rhinology.
6. Diseases of Children.
7. Materia Medica, Pharmacy and Therapeutics.
8. Physiology and Dietetics.
9. Nervous and Mental Diseases.
10. Cutaneous Medicine and Surgery.
11. Hygiene and Sanitary Science.
12. Stomatology.
13. Pathology and Bacteriology.

SEC. 2.—Each Section shall be composed of such members as have complied with Sections 1, 2, 3, and 4 of Chapter I of these By-Laws.

SEC. 3. *Officers of Sections.*—The officers of each Section shall be a Chairman, a Secretary, and an Executive Committee. The latter shall consist of the last three retiring chairmen. At the commencement of the afternoon session of the third day of each annual meeting, each Section shall elect its own officers to serve for the ensuing year, their duties to commence with the close of the annual meeting at which they are elected and to continue until their successors are elected and qualify. Each

Section shall elect annually two representatives to the House of Delegates. In each Section a nominating committee of three members shall be elected by open ballot on the first day to make nominations for section officers.

SEC. 4. *Addresses in Sections.*—The Chairman of each Section shall prepare an address on recent advances in the branches belonging to his Section, including such suggestions in regard to improvements or methods of work as he may deem important, and present the same to the Section over which he presides on the first day of its annual session. The reading of such address shall occupy not more than twenty minutes.

SEC. 5. *Papers Before Sections.*—It shall be the duty of every member of the Association who proposes to present a paper or report before a Section to forward either the paper or an abstract indicative of its contents, and its *length*, to the Secretary of such Section, at least one month before the annual meeting at which the paper or report is to be presented. This abstract shall contain not less than fifty nor more than two hundred words.

It shall also be the duty of the Secretary of each Section to arrange such papers in the order in which they shall be read, after which he shall send such information to the Secretary of the ASSOCIATION at least twenty-eight days before the annual meeting, for publication in the official program for the use of all members attending the annual meeting.

SEC. 6. *Length of Papers and Discussions.*—No paper, the reading of which occupies more than twenty minutes, shall be read before any Section. Authors, however, may read abstracts before the Section within the allotted twenty minutes. Such papers shall be referred by the Section to the Executive Committee or to a sub-committee specially appointed for their examination. Such committee shall be allowed twenty days for such examination: at the end of which time they shall forward the Papers to the Board of Trustees, or to the Editor, with such recommendations as they may deem proper. No member shall address the Section more than once upon the same subject, nor speak longer than five minutes without the approval of the Section.

All papers presented directly to the Association, and other matters, may, at the discretion of the Association, be referred to the various Sections for their consideration and report.

SEC. 7. *Publication of Papers and Reports.*—No report or other paper shall be entitled to publication in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, unless it be approved by each member of the Executive Committee of the Section before which it is read.

Authors of papers are required to return their proofs within two weeks after their reception.

Every paper received by this association and ordered to be published, and all plates or other means of illustration, shall be considered the exclusive property of the Association, and shall be published and sold for the exclusive benefit of the Association.

The Board of Trustees shall have full discretionary power to omit from the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, in part or in whole, any paper that may be referred to it by the Association, or any one of the Sections, unless specially instructed to the contrary by vote of the Association.

No report or other paper shall be presented to this Association, or any one of its Sections, unless it be so prepared that it can be put at once into the hands of the Secretary to be transmitted to the Board of Trustees, and all papers read before sections must be approved by each member of the Executive Committee of that section.

No paper shall be printed as having been read before this association unless it has actually been read by its author or unless for special reasons when the author has been present and prepared to read the paper the Association or Section to which it is presented shall unanimously vote to have it read by title. All other papers shall be treated by the board of trustees and editor as volunteer papers

CHAPTER X.

ADDRESSES.

The House of Delegates shall elect annually, three members to deliver addresses in the General Session of the next ensuing annual meeting—one on some topic or topics relating to general medicine, one relating to general surgery, and one relating to state medicine. None of these addresses shall exceed thirty minutes in its delivery.

CHAPTER XI.

DELEGATES TO FOREIGN MEDICAL SOCIETIES.

The President shall be authorized to appoint annually delegates to represent this Association at the meetings of such scientific bodies in foreign countries as are in affiliation with this Association, whose appointment is not otherwise provided for.

CHAPTER XII.

RULES OF ORDER.

SECTION 1. This Association shall be governed by the rules of order prescribed in "Roberts' Manual."

SEC. 2. *The Previous Question.*—When the previous question is demanded, it shall take at least ten members to second it; and when the main question is put under force of the previous question and negatived, the question shall remain under consideration as if the previous question had not been enforced.

SEC. 3. *Duties of Members.*—No one shall be permitted to address the Association, until he shall have announced his name and residence, which shall be distinctly repeated by the chair; but no member, except an officer of the Association, or an appointed orator, or an officer of a committee presenting a report, shall be permitted to address the General Sessions from the platform. Remarks shall be limited to five minutes.

SEC. 4. No new business shall be introduced at the General Sessions of the Association on the last day of each meeting, except by unanimous consent.

CHAPTER XIII.

ORDER OF BUSINESS.

SECTION 1. *General Sessions.*—The order of business of the General Sessions at the annual meetings of the AMERICAN MEDICAL ASSOCIATION shall at all times be subject to the vote of three-fourths of all the members in attendance; and, until permanently altered, except when for a time suspended, it shall be as follows:

1. The calling of the meeting to order by the President elected the preceding year, or, in his absence, by one of the Vice-Presidents.
2. Reading and adopting of minutes.
3. The report of the Committee of Arrangements.
4. The reception of members by invitation.
5. Reports of standing committees in the order named in the Constitution.
6. The annual address of the President.
7. The reception of the reports of all special committees and voluntary communications, and their reference to the appropriate Sections or committees.
8. The reading and consideration of the reports of the Committees on Prize Essays, of Chairmen of Sections, and of any special committees.
9. Resolutions introducing new business, and instructions to the standing committees.
10. Reports from the several Sections.
11. Unfinished and miscellaneous business.
12. Report of the House of Delegates.
13. Adjournment.

SEC. 2. *The Opening Session.*—The opening session shall be for the addresses of welcome, and the responses thereto, for the report of the Committee of Arrangements, and other exercises pertaining to the opening of the General Session, and for such other business as may be provided. At this Session the President shall deliver his annual address, which shall be referred to the House of Delegates for action.

SEC. 3. *The Closing Session.*—The closing session shall be devoted to such exercises as may be provided, to the report of the House of Delegates, to the announcement of the election of officers, and to their installation.

SEC. 4. *House of Delegates.*—

1. Call to order by the President.
2. Reading and adopting of the minutes.
3. Reports of officers.
4. Reports of committees.
5. Consideration of recommendations contained in the President's address.
6. Consideration of memorials, resolutions or other business referred from the General Session.
7. Consideration of memorials, resolutions or other business referred from the Sections.
8. Consideration of memorials, resolutions or other business referred from the State Societies.
9. Unfinished business.
10. New business.

SEC. 5. *Sections.*—Each Section shall have authority to arrange its own order of business.

CHAPTER XIV.

AMENDMENTS.

The House of Delegates shall have power to frame by-laws for its own government and for the government of the Association, and to amend the same, *provided*, that the proposed amendment shall be submitted in writing and lay over one day before it is acted upon; and provided, further, that it shall receive the affirmative vote of three-fourths of the Delegates present at the meeting.

CHAPTER XV.

These By-Laws shall be in effect and force after the close of the annual meeting of 1901; provided that the Sections shall elect delegates during the session for 1901-2, and provided further that nothing in these By-Laws shall be construed to repeal the rules of the Association governing the relation of members to each other and to the Association.

After the reading of the report, the President asked the Association what disposition it would make of it.

Dr. Harris, New York, in order to properly bring the report before the Association, moved that the full report of the Joint Committee on Reorganization, including the Revised Constitution and By-Laws, be received and adopted. Seconded.

After the report was discussed by Drs. Bulkley and McCormack, Dr. Bulkley expressed the hope that the motion to adopt the report would be carried unanimously, if possible.

There were cries of "Question! Question!"

The President then put the motion and declared the report adopted by a large majority.

Dr. McCormack then moved to reconsider the vote by which the report was adopted, and that the motion to reconsider be laid upon the table. Carried.

Dr. Maher, California, moved that a report of the proceedings of the General Sessions, together with copies of the revised Constitution and By-Laws be printed and mailed to each delegate as soon as possible after final adjournment. Seconded.

Dr. Reynolds, Kentucky, moved as an amendment that a copy of the Constitution and By-Laws be printed in separate form, in order that the members may put them in their pockets for reference, and that a copy be distributed to every member. Seconded. The motion as amended was carried.

The President stated that inasmuch as there might be some clerical errors in the Constitution and By-Laws that had been adopted, he suggested that a committee of three be appointed for the purpose of engrossing the Constitution and By-Laws.

Dr. McMurtry, Kentucky, moved that the Committee on Reorganization attend to this matter. Carried.

This Committee consists of Drs. J. N. McCormack, P. Maxwell Foshay, and George H. Simmons.

Dr. Love, New York, moved that a vote of thanks be extended to the Committee on Reorganization for its superb report. Carried.

Dr. John A. Wyeth, New York, was then introduced and delivered the oration in surgery. (See page 1611.)

The President called for the report of the Committee on American Medical Association Medal, and in the absence of Dr. Osler, Baltimore, chairman, the report was passed.

The report of the Committee on Senn Medal, Dr. Maurice H. Richardson, Boston, chairman, was called for, and in the absence of Dr. Richardson, Dr. F. H. Wiggin, New York, made a verbal report in behalf of the committee, stating that the committee had received two papers during the year, and after due consideration of the matter came to the conclusion that neither paper was of sufficient scientific interest to warrant any award, and therefore no award was made this year.

The President said that the report of this committee required no action on the part of the Association, and that the committee would be continued.

The next order was the report of the Committee on the Rush Monument Fund, which, in the absence of Dr. James C. Wilson, Philadelphia, chairman, was read by Dr. Henry D. Holton.

Committee on Rush Monument Fund.

H. D. HORTON, Treas., in account with Rush Monument Fund:

1901.	Dr.
June 1, To cash on hand	$365 05
June 28, To cash from Dr. A. Jacobi	100 00
June 29, To cash from West Virginia Medical Society	50 00
To cash from Averill note	765 00
To interest from funds invested	602 50
	$1882 55

	Cr.
By one thousand dollar bond Western Union Telegraph	$1000 00
By interest and expenses	140 67
By cash on hand	741 88
	$1882 55

Amount of Fund June 1, 1901.

Funds invested in bond and mortgage	$11,200 00
Cash on hand	741 88
	$11,941 88

Dr. Reed, Wyoming, moved that the report be received and placed on file. Carried.

The report of the Committee on Scientific Research was called for and the secretary read the following letter:

Committee on Scientific Research.

BALTIMORE, June 1, 1901.

Dr. George H. Simmons, Secretary of the American Medical Association:

Dear Doctor:—I regret that it is impossible for me to be present at the meeting of the American Medical Association this year.

I do not suppose that Dr. Wood has been able, on account of illness, to send a report in behalf of the Committee on Scientific Research. I can not learn that there was any organization, and certainly there has been no meeting of the Committee. Dr. Wood, however, inserted notices in the medical journals calling attention to the existence of the grant by the Association, and requested that applications for appropriations from the fund be sent to him before a specified date. Ten such applications were received, and Dr. Wood communicated with the members of the Committee by letter regarding the selection of applicants and the amounts to be appropriated to each. A decision in this matter had not been reached when Dr. Wood became so ill that he could give no further attention to it. He then asked me to take the matter in hand. You may recall that I then communicated with you, and that you suggested that in view of the lack of previous organization and of meeting of the Committee, and the lateness of the season remaining for action, it might be well to postpone further action until after the meeting of the Association. I have followed your suggestion. There have been ten applications for appropriations from the funds, several of which at least were eminently deserving.

While I regret that the initiation of this important undertaking on the part of the Association has not led to results during the first year, I sincerely trust that the grant will be continued. If the $500 appropriated by the Association last year could be added to an additional $500, making $1000 for the coming year, I believe that much good would result. If this is not deemed best, I hope that at least the appropriation of $500 will be continued for another year. I should suggest that the committee be not limited as now to the granting of sums not exceeding $100 to a single individual. It would be well, I think, in selecting the Committee to consider somewhat the care with which the members can be brought together for conference.

Hoping that the Association will continue these grants for research, I am, very truly yours, WILLIAM H. WELCH.

Dr. Bert Ellis, California, moved that the report be referred to the General Executive Committee with instructions to report back to the Association. Seconded.

Dr. Happel, Tennessee, asked whether the report did not involve the expenditure of money, to which the President replied it did, and the President suggested that it would be well to refer it both to the Board of Trustees and the Executive Committee for a joint report.

This suggestion was accepted by the mover and seconder of the original motion, and the motion as amended was carried.

Dr. Sims, New York, offered the following resolution:

Resolved, That this body deplores the action of Congress in abolishing the army post exchange, or canteen, and, in the interests of discipline, morality and sanitation, recommends its re-establishment at the earliest possible date.

Dr. Reed, Wyoming, moved that the resolution be adopted, which was seconded, and after some discussion a motion was made to lay the resolution on the table, which was carried, there being 54 for, and 25 against, tabling the resolution.

Dr. Reed, Wyoming, then brought up the matter in a different form and moved that a committee of three be appointed by the President to take up this resolution and present it before the proper body for consideration. Seconded.

The Chair ruled that the motion of Dr. Reed revived the specific subject that had been disposed of, and stated that if a motion was made to incorporate the general subject in proper

terms, it might come within parliamentary rules. Dr. Reed, Wyoming, thereupon moved that a special committee be appointed to consider the question of asking Congress to repeal the Canteen Act. Seconded.

It was moved as an amendment, that instead of appointing a special committee, the matter be referred to the Committee on National Legislation. Seconded.

The amendment was accepted, and as amended was carried.

The Secretary announced the members of the Nominating Committee.

On motion, the Association then adjourned until Thursday.

Nominating Committee.

The Secretary announced the members of the Nominating Committee as follows:

COMMITTEE ON NOMINATIONS.—Alabama, W. G. Harrison; Arizona, R. W. Craig; Arkansas, Joseph P. Runyan; California, Bert Ellis; Colorado, C. K. Fleming; Connecticut, J. W. Wright; Delaware, John Palmer, Jr.; District of Columbia, G. L. McGruder; Florida, ———; Georgia, Thos. D. Coleman: Idaho, ———; Illinois, Hugh T. Patrick; Indian Territory, ———; Indiana, C. A. Daugherty; Iowa, Donald Macrea; Kansas, R. S. Magee; Kentucky, W. H. Wathen; Louisiana, ———; Maine, Seth Gordon; Maryland, ———; Massachusetts, Geo. J. Engelmann; Michigan, F. W. Robbins; Minnesota, A. J. Stone; Mississippi, W. H. Barr; Missouri, C. H. Wallace; Montana, T. J. Murray; Nebraska, W. S. Conwell; Nevada, ———; New Hampshire, Geo. Cook; New Jersey, Richard C. Newton; New Mexico, Edwin B. Shaw; New York, E. Elliott Harris; North Carolina, James A. Burrough; North Dakota, J. N. Wear; Ohio, Jos. E. Cook; Oklahoma Territory, R. D. Love; Oregon, Andrew C. Smith; Pennsylvania, W. S. Foster; Rhode Island, Philip K. Taylor; South Carolina, Charles F. McGahan; South Dakota, D. W. Rudgers; Tennessee, G. C. Savage; Texas, Bacon Saunders; Utah, S. C. Baldwin; Vermont, M. R. Crain; Virginia, Christopher Tompkins; Washington, N. Fred Essig; West Virginia, A. H. Thayer; Wisconsin, W. H. Earles; Wyoming, R. Harvey Reed; U. S. Marine-Hospital Corps, Geo. T. Vaughn; U. S. Army, Major Richards.

Report of Committee on Nomination.

Your Committee on Nomination met June 5, with Dr. Wm. H. Wathen, chairman, and Dr. Thomas D. Coleman, secretary, and begs leave to report as follows:

For President for the ensuing year, Dr. John A. Wyeth, New York; first vice-president, Alonzo Garcelon, Maine; second vice-president, A. J. Stone, Minnesota; third vice-president, A. F. Jonas, Nebraska; fourth vice-president, John R. Dibrell, Arkansas. Treasurer, Henry P. Newman, Illinois. Secretary, Geo. H. Simmons, Illinois. On motion, the ballot of the committee was cast for Geo. W. Webster, Illinois, for Librarian. Board of Trustees, term expiring 1904: W. W. Grant, Colorado; John F. Fulton, Minnesota; T. J. Happel, Tennessee. Judicial Council: Geo. Cook, New Hampshire; H. H. Grant, Kentucky; John B. Murphy, Illinois; Philip Marvel, New Jersey; Louis H. Taylor, Pennsylvania; John L. Dawson, South Carolina; N. Fred Essig, Washington. Oration in Surgery, Harry Sherman, California. Oration in Medicine, Frank Billings, Illinois. Oration in State Medicine, J. M. Emmert, Iowa. Place of Meeting, 1902, Saratoga Springs, N. Y. Chairman of Committee of Arrangements: G. F. Comstock.

[At the General Session, June 6, the preceding officers were elected.]

Book Notice.

MUNICIPAL SANITATION IN THE UNITED STATES. By Charles V. Chapin, M.D., Superintendent of Health of the City of Providence. Cloth. Pp. 970. Price, $5.00. Providence, R. I.: Snow & Farnham. 1901.

Dr. Chapin's work is a valuable compilation of the data of sanitary legislation in the United States, including the laws in regard to the registration of vital statistics. It is a compendium of sanitary practice, and not intended so much to say what should be done as what has been and is being done. The author's personal opinions are not obtruded, though they may be indicated in places. The utility of such a volume is at once apparent: there are few who are interested in sanitary matters who have not at times felt the need of a work of the kind. It does not materially lessen its value that it is impossible for it to be absolutely up to date: that would be impossible with the extensive field covered and the ever-present vicissitudes of municipal legislation. It is, nevertheless, probably as nearly so as it is possible for such a volume to be, and it is therefore a most valuable work of reference and one that will not be likely to be soon superseded. A thorough inspection reveals comparatively few deficiencies and a surprising number of facts that might reasonably be expected to escape notice. The chief trouble, as it appears to us, is, that in this country at least, sanitary legislation and sanitary practice do not always go hand in hand: the execution of the laws is too often defective. It would be impossible, however, to indicate all such deficiencies in a volume like this, which is on the whole the best, as the most recent and thorough work of its kind available for the physician and sanitarian. The author has conferred an obligation on both by its production.

Societies.

COMING MEETINGS.

South Dakota State Medical Society, Huron, June 10-11.
International Association of Railway Surgeons, Milwaukee, June 10-12.
Medical Society of Delaware, Lewes, June 11.
Oregon State Medical Society, Portland, June 11-12.
American Medico-Psychological Association, Milwaukee, Wis., June 11-14.
Maine Medical Association, Portland, June 12-14.
Massachusetts Medical Society, Boston, June 12.

AMERICAN GYNECOLOGICAL SOCIETY.

26th Annual Meeting, held in Chicago, May 30, 31, and June 1, 1901.

President Dr. Ely Van de Warker, of Syracuse, N. Y., in the chair.

An address of welcome was delivered by Dr. Fernand Henrotin, of Chicago, which was responded to by the President.

DR. CHAUNCEY D. PALMER, of Cincinnati, read a paper on

Intraligamentous Cysts; Their Diagnosis and Treatment.

This paper had special reference to the diagnosis and treatment of these tumors. He spoke first of the classification of ovarian tumors in our text-books as being unsatisfactory. What we need is a classification that is helpful in the way of diagnosis and treatment. He spoke then of oöphoritic, paroöphoritic and parovarian cysts. He then referred to the symptoms and signs before removal which would enable the operator to differentiate intraligamentous cysts.

All ovarian cysts of whatever kind should be removed by surgical procedures, the sooner the better. But the removal of intraligamentous cysts demands the most correct knowledge of the parts and surroundings and superior skill. The assayist then dwelt upon the advisability, if not necessity, of operators availing themselves of the extraordinary opportunities, when the abdomen is opened, to see and to feel and to map out what it is, where it is, and determine what methods are best to adopt in the removal of pelvic growths. Intraligamentous cysts are, as a rule, easily peeled out of the broad ligaments. Enucleation, first suggested by Dr. Mynter, of Buffalo, can be done, but it ought only to be attempted when the attachments are superficial. An attempt begun in the old way on some intraligamentous cysts may have to be abandoned as an incomplete operation, or as an inoperable case. Many such cases have died on the table. He referred to the danger of wounding the ureters, wounding the uterine arteries, and then he earnestly advocated the advisability of completely exsecting the uterus as well as the appendages thereof, when the cysts are bilateral, and where they are deeply embedded within the surrounding textures. This new method of procedure, while seemingly the more radical way, is the only rational method of a skillful surgical extirpation of the diseased structures.

DR. WILLIAM H. WATHEN, of Louisville, read a paper on

Improved Technic in the Surgical Treatment of Uterine Myomata.

The perfection of technic in operations for the removal

of uterine or pelvic myomata is the result of the application in these operations of the variety of details suggested and practiced by different surgeons, and operators no longer speak of hysterectomy as an operation peculiar to anyone, nor can they in many instances outline in advance the complete technic to be observed or carried out in an operation. The dangers during the operation are hemorrhage or injury to the bladder, ureters or intestines, and if the surgeon is prepared to avoid these, and operate speedily, there is hardly a condition that may not be successfully treated. Unless there is some contraindication, myomata not larger than a fetal head may be easily removed per vaginam, and if the operator uses well-constructed forceps no successful operator would wound the bladder, the intestines or the ureter, the last-named of which, if necessary, may be protected by ureteral catherization, which may also be used as a means of protecting the ureters in the suprapubic method. Experience will aid in the selection of cases suitable for the vaginal method. While the author has removed with ease uterine myomata twice the size of a fetal head, he has had great difficulty in removing one much smaller than a fetal head.

Painful Menstruation as a Factor in Determining Character of Operations on the Uterine Appendages.

DR. PHILANDER A. HARRIS, of Paterson, N. J., said that extra-uterine suppurations so commonly resulting from gonorrheal infection of the uterus, and from ordinary infections of childbirth and abortion, are of such frequent occurrence as to quite overshadow in importance all other causes of acquired dysmenorrhea. Not all cases of suppuration in the uterus or tubes cause painful menstruation. A small percentage of such cases, even in the presence of extensive and long-continued suppuration, menstruate painlessly. Tubal suppurations may, and usually do, cause painful menstruation before the development of ovarian abscess. This is proven by the fact that surgeons so often have exsected both suppurated tubes, at the same time leaving both ovaries, which appeared healthy, with the arrest of all pelvic pains and restoration to health, including a cure of the dysmenorrhea. Ovarian abscess frequently develops from tubal suppuration, with the effect of increasing, modifying or localizing not only intermenstrual pains, but also the pains of menstruation. Pronounced and persistent primary dysmenorrhea, or the dysmenorrhea which exists from puberty, will probably not be obliterated by the simple excision of diseased tubes, except, as in certain rare instances, it be due to gonorrheal infection prior to the beginning of menstruation, in which event it would be curable by excision of the tubes, vaginal incision and drainage, or the removal of the pyogenic sacs in the ovaries. By excision of a tube is meant its removal to the uterine mucosa by making an elliptical incision in the uterus about the tube and closing the chasm with sutures. The author's partially conservative surgical work in this connection has shown him that, while he has maintained for about 95 per cent. of all women thus operated the item of menstruation, he has had a higher percentage of relief and symptomatic cures, and far greater satisfaction with the results obtained than accrued from his former and more extensively mutilating and exsective operations.

DR. E. C. GEHRUNG, of St. Louis, read a paper entitled

Status of Menstruation.

Menstruation is not, as has been supposed, a special function of the generative organs of women, but only the perverted counterpart of the menstruation of the lower animals. This transformation into a monthly "hemorrhage" (menorrhagia) has generally been brought about by the necessities and results of the social, moral and connubial life of mankind as well as through the transmission by inheritance of certain debilities of the generative apparatus, and more especially by the erect position and its natural consequences, assumed by the human species. This fact being admitted, the profuseness and prolongation of the sanguineous loss is a proof that it is now a physiologico-pathologic condition, predisposing to anemia and all its direful consequences, pre-eminently to the nervous system. In the great majority of cases the quantity of blood lost during so-called normal menstruation is an unnecessary, and therefore pathologic, waste of the very essence of life. It stands to reason that in all cases of depressed vitality this loss should be reduced as much as possible. The best means for controlling the waste is the vaginal (not uterine) tampon, applied "secundum artem." Whenever curettage is not indicated or applicable, and where it has failed in gaining the desired result, the tampon is the means indicated. Chronic and acute inflammation of the pelvic organs are contraindications. Unless the restriction of the waste is put in execution, tonics are useless, because they simply increase the pressure and consequently the waste, while after the repression, or simultaneously with it, they seem to work wonders.

The Age of First Menstruation in the United States.

DR. G. J. ENGELMANN, of Boston, read a paper on this subject. Over 10,000 observations as to the time of first menstruation of American-born women, many with reference to points never before investigated, here or elsewhere, gives him ample material for an authoritative solution of the questions involved. These observations, from his own practice and that of helpful friends, are many, and the identity of results obtained in far distant points, Montreal and New Orleans, St. Louis, Cincinnati and Boston, vouches for their correctness. Furthermore, they are corroborated by all previous records, a total of 6,000, in such points as these may cover. The American-born are more precocious than the women of other countries in the same zone; 14 is the age of puberty in the United States and Canada; 15.5 in the temperate zone of Europe. The native American is more precocious than the American born of foreign parents, but the latter closely approximates the American of American parentage, even in the first generation. Racial characteristics fade rapidly away; the age of puberty in Germany is 15.5 to 16, in Ireland 15.3, and for the girl born in America of German or Irish parentage 14.5, in St. Louis as it is in Montreal; the Canadian-French are the only exception, between 14 and 15 in their native land, these alone of all races are more precocious than the American of the same class when born in this country, 13.7 is the mean age; climate here has absolutely no influence; race very little. Mentality, surroundings, education and nerve stimulation stand out prominently in this country as the factors which determine precocity.

Cancer of the Uterine Fundus.

DR. J. M. BALDY, of Philadelphia, read this paper. It is with the object of calling attention of the profession to, and emphasizing as emphatically as possible, the wide practical difference between cancer of the cervix and cancer of the fundus that this paper is presented. It has been said that practically all cases of cancer of the cervix eventually die of the disease; that practically all cancers of the fundus remain well if operated upon. This statement is more generally true than one would suppose at first glance. It has been my own, and the experience of other surgeons. Less than 5 per cent. of cases of cancer of the cervix are cured, no matter what line of treatment is followed. Twenty-four cases of cancer of the fundus have passed through my hands. Of these, 3 were either too far advanced for operation, or refused operative treatment. On the remaining 21 cases hysterectomy was performed by the vaginal method, the abdominal method or the combined vagino-abdominal method. Two of the 21 cases died of the operation. Of the 19 remaining cases, all are alive and well to-day, with two exceptions. One of these died of pneumonia seven years after operation. It is strongly suspected from the reports that the other one has recurrence. Making all allowances for mistakes and the general unreliability of statistics, the fact stands out strongly that about 75 per cent. of these cases are well and free from signs of cancer, as against 5 per cent. or less of cancer of the cervix.

The Status of Hysterectomy for Uterine Cancer.

DR. CYRUS A. KIRKLEY, of Toledo, Ohio, read a paper on this subject. The paper was a plea for conservatism in the surgical

treatment of uterine cancer, and contrasted its pathology and treatment of half a century ago with that of the present. Electro-cauterization, as practiced by Dr. Byrne, was given the preference over all methods of operating. It had not received the recognition it deserves. Dr. Bryne's skill in its application could only be acquired as in other operations. Freedom from danger and longer period of exemption were its strongest recommendations. An old table published by Dr. Bryne in 1889 was referred to, so that in comparison vaginal hysterectomy might have the advantage. In a total of 367 cases there was not a single death from the operation. The position held by our fathers fifty years ago, that hysterectomy for cancer has its narrow limitations, that it should be done early, if at all, and that only temporary relief can be hoped for, is just as true to-day.

Prolapse and Procidentia of the Uterus.

DR. HENRY T. BYFORD, of Chicago, read this paper. He holds that the essential feature of the prolapse is the want of supporting power of the pelvic connective tissue. To suture the uterus to the abdominal walls is to support the pelvic connective tissue by means of the uterus and is wrong and inefficient. The best and most rational method is to draw up and attach the peri-uterine tissue and thus keep the uterus up by means of its natural supports. In addition to the ordinary operations for lacerations and relaxation at the vaginal outlet, the author proposed a method which he described in detail.

Panhysterokolpectomy, A New Prolapsus Operation.

DR. GEORGE M. EDEBOHLS, of New York City, read a paper under this title. There is room, in the treatment of complete prolapse of the uterus and vagina, for an operation which, properly and successfully performed, will guarantee a certain and permanent cure of the prolapse. Such an operation is panhysterokolpectomy, the essentials of which consists in complete removal of the uterus and vagina, followed by operative obliteration or columnization of the bed of the genital tract. The tubes and ovaries are not disturbed, if healthy; if diseased, they are removed with the uterus and vagina. Obliteration and columnization of the bed of the removed uterus and vagina is effected by means of from seven to nine buried pursing sutures of chromicized catgut placed about 2 to 2.5 centimeters apart, and running parallel to each other. Each suture gathers the raw surfaces from the periphery in circular fashion, and draws or purses them together in the median line. It is buried by being pushed upward towards the abdomen, while the next suture is being tied beneath it.

The effect of the completed operation is to build a solid pelvic floor 10 to 15 centimeters in depth, and to establish broad apposition of the base of the bladder and the anterior surface of the rectum, conditions similar to those obtaining in the male pelvis.

Pus in Abdominal Operations.

DR. HUNTER ROBB, of Cleveland, read this paper. The author has become convinced that operators not infrequently err in carrying out radical abdominal procedures when the patient's resistance is in such a lowered condition that she is very apt to succumb to the shock of the operation *per se*. Such a condition must always be given careful consideration when deciding for or against operative interference during an acute attack of a localized or more or less generalized pelvic peritonitis. Believing that this factor has a very important significance in influencing results, the speaker has made it a rule during the acute stage of a pelvic abscess to defer an operation so long as it seems safe to do so. In the meanwhile, the patient is kept perfectly quiet on her back in bed, and heat in the form of flaxseed poultices or turpentine stupes is applied to the abdomen. A vaginal douche of a gallon of a warm one per cent. solution of carbolic acid, or a saturated boracic acid solution, is given twice daily. For nourishing the patients he depends upon nutritive injections entirely.

After briefly discussing drainage in pus cases, the author gave the clinical and bacteriological analyses of 72 consecutive, unselected abdominal sections for suppurative diseases of the tubes and ovaries, with two deaths.

Removal of the Female Urinary Bladder for Malignant Disease.

DR. MATTHEW D. MANN, of Buffalo, said that treatment may be removal through the urethra, the vaginal septum, or by suprapubic cystotomy. The operations are the removal of the growth and its base; resection of part of the bladder; or cystectomy. The ureters need no attention at the time of the operation, as by the removal of a portion of the anterior vaginal wall they will discharge into the vagina. If possible, the ureteric openings into the bladder should be left intact. This will rarely be possible. He does not believe in uretero-intestinal anastomosis. The vagina can be used as a receptacle for the urine, as was done by Pawlik. If this be done, there will be little danger of infection traveling to the kidneys, as the newly made bladder can be kept clean.

The operation is done in the Trendelenburg position. The peritoneum over the bladder being cut, the bladder is enucleated by the fingers, and the base, with the anterior vaginal wall still attached, is removed. The uterus is then removed, and the peritoneum closed over the floor of the pelvis. Mann reports two cases, both of which recovered from the operation.

Total Extirpation of the Urinary Bladder.

DR. J. WESLEY BOVÉE, of Washington, D. C., gave an epitome of the history of operative procedures in partial and complete removal of the bladder, and a digest of 96 cases, which he had collected from the literature. He discussed the methods of disposal of the ureters, the indications and contraindications, and the results of all operations up to date.

Shock from a Clinical Standpoint.

DR. EUGENE BOISE, of Grand Rapids, Mich., read a paper with this title. The generally accepted idea that the pathology of shock is essentially a paresis of the vasomotor nerves, does not seem to be borne out by the clinical manifestations, when analyzed according to undisputed physiologic facts. The basis of the theory of paresis is the thought that the extremely low arterial tension of shock is inconsistent with vasomotor stimulation, which, by causing arterial contraction, should give high tension. On the contrary, the symptoms of shock can, in reality, only be explained by the theory of extreme stimulation of the entire sympathetic system. Laboratory experiments have demonstrated that extreme stimulation of the cervical sympathetic will cause cardiac and arterial spasm with consequent low arterial tension by reason of incomplete diastolic relaxation of the heart. Post-mortem records show that in fatal cases of shock the heart is found contracted and empty, even ruptured, showing a condition of extreme stimulation of the vasomotor system, rather than paresis. In shock, then, there is arterial and cardiac spasm, with consequent low tension. This causes the peculiar pallor and the condition of mental and physical lethargy. The perspiration of shock is caused by stimulation of the secretory nerves of the sweat glands, branches of the sympathetic system. Experiments have shown that the secretion of perspiration is independent of vascular conditions. The other clinical manifestations of shock can readily be explained by this theory of hyper-irritation of the entire sympathetic system, and only by this. Moreover, those remedies which are of benefit in shock are such as act as sedatives to the vasomotor nerves. Nitrite of amyl and nitro-glycerin are noted arterial relaxants, and yet they are very beneficial in shock; so, also, with strychnia. The opinion of operators of large experience is that to be of benefit it must be given in very large doses. And yet all therapeutists agree that in such doses strychnia paralyzes the vasomotor center and the intracardiac ganglia, and therefore is absolutely contraindicated if the vasomotor nerves are already paretic; so also with normal saline infusion. To derive the greatest benefit it should be used intravenously and at a temperature of 118 or 120. Thus, when diluted by the mass of blood in the vena cava, the temperature is so reduced as to be sedative to the irritated cardiac and arterial nerves and muscles, and their spasmodic condition is relieved. Therefore, shock is essentially a hyper-irritation of the entire sympathetic system of nerves.

Resections and Exsections.

DR. FERNAND HENROTIN, of Chicago, presented the salient

points concerning the questions involved in resection of the ovaries and tubes, as there is still much doubt regarding the results obtained, and as to the proper methods to pursue. He considered the subject of resection and exsection under three heads: 1, diseases involving the tubes; 2, ovarian disease; 3, chronic composite diseases. These three topics were taken up seriatim, and discussed at great length. The author has performed at least 250 operations which might be classified as salpingotomies, salpingectomies, and ovarian resections. He could safely state that 40 per cent. may be termed delayed and partial cures, or failures. Of this 40 per cent. the heaviest proportion by far comes from such as have had salpingotomy or tubal resection performed. The next most complaining class are those in which the ovaries alone were resected and the least suffering and the best health are found among those in whom the tubes when affected were entirely exsected and the whole or portion of the ovaries was removed. He has not had to re-operate more than five or six times. By salpingotomy the author means opening into the lumen of the tube, and by tubal resection is meant the removal of a portion of a tube including the mucosa, and his statement presumes a material pathologic alteration in the portion removed or incised. Under such conditions, he had no hesitation in stating that for every baby born there would be 40 uncured or partially cured patients.

The Future of Gynecology as a Surgical Specialty.

The President's Address was on the future of gynecology as a surgical specialty. The general scope of DR. VAN DE WARKER'S address was given in an anecdote of a noted ovariotomist who was invited by the President to contribute a paper to the Section on Obstetrics and Gynecology of the AMERICAN MEDICAL ASSOCIATION, at the session at which he presided as Chairman. The ovariotomist declined on the ground that he was not a gynecologist. That ovariotomy and hysterectomy and other abdominal operations were general surgical procedures, and were more in the line of the general surgeon than the gynecologist, and wound up his letter of refusal by predicting that the time was not far distant when these operations would be by general consent of the public in the hands of the all-round surgeon. The speaker asks the question if that time has not arrived. The public consults the general surgeon as frequently as the special surgeon. A large proportion of the major pelvic operations are now made by men who are not specially recognized as gynecologists. Surgery in general has made as marked advances in all directions as that which was at one time by common consent relegated to the specialist. The lay public has become more familiar with serious abdominal operations made by the general surgeon than those made by the gynecologist. The old operation, ovariotomy, is but rarely seen in the title of a paper, and is relegated from the current journal to the pages of the text-books. The same may be said of the removal of the tubes and ovaries, the removal of pus sacs, Battie's and Tait's operations. Great international reputations were made in these fields, which is no longer possible. The influence of the gynecological surgeon will, however, always be felt. To him as a man of last resort will always be left the question of methods and expediency. Total hysterectomy for cancer is yet on trial. It is already abandoned by able men, while others are hopeful of good results. We know little of the subject of genital ptosis in women; our treatment of uterine displacements is rank empiricism. Would not the gynecologists of France be doing a better service to their country and to science if they were to find the cause and conceive the remedy for the decadence of the birth-rate, rather than bend their energies in finding a new way to perform an operation?

Indications for Cesarean Section as Furnished by Pelvic Contractions.

DR. J. W. WILLIAMS, of Baltimore, stated that in 2123 cases delivered in the obstetrical department of the Johns Hopkins Hospital, 278 (13.1 per cent.) had contracted pelves. The pelves were measured both externally and internally, and designated as contracted when the conjugata vera was 10 cm. or less in generally contracted, and 9.5 cm. or less in flat, pelves. Of the patients 941 were white and 1182 black. Contracted pelves occurred in 6.91 per cent. of the former, and 18.1 per cent. of the latter. That is, in every 14th white and every 6th black woman. Of the 278 cases 199 ended spontaneously (71.58 per cent.). The number of spontaneous labors decreased with the increase in the pelvic contraction, as shown by the following table: Conjugate vera 10.9 cm., 77.28 per cent. spontaneous; 8.9-8 cm., 61.54 per cent. spontaneous; 7.9-7 cm., 33 1/3 per cent. spontaneous; 6.9-5.5 cm., 0 per cent. spontaneous. The cases requiring operation were delivered by high forceps, version, symphysiotomy, Cesarean section, craniotomy, upon the dead child, or embryotomy, according to circumstances, giving a gross fetal mortality of 12.96 per cent., and a gross maternal mortality of 2.88 per cent., which, by deducting the cases in which the death of the child or the mother was not due to the operators, gave a corrected mortality of 4.32 and 0.72 per cent. respectively. In view of the markedly improved results following Cesarean section, the indications for its performance should be widened. Thus we find that Zweifel, Olshausen, Reynolds, Bar, Charles and Cragin have performed 162 operations with 5 deaths, a mortality of 3 per cent. He therefore believes that in uninfected cases the upper limit for the absolute indication for Cesarean section should be advanced from 5.5 to 7 cm., and the relative indication from 7 or 7.5 to 8.5 for flat, and 9 cm. for generally contracted pelves. With the absolute indication the operation should be done either at the end of pregnancy or the onset of labor; but when the relative indication is present the woman should be allowed to go into the second stage of labor, and have bearing-down pains for one hour, when, if the head does not show signs of molding or descending, Cesarean section should be performed, instead of forceps upon the movable head or version. So that at present Cesarean section for the relative indication should compete with high forceps or version, instead of with craniotomy upon the living child, as in the past. On the other hand, if the patient be infected, or her surroundings such that an aseptic operation can not be performed, high forceps or version should be attempted, followed by craniotomy in case one fails to deliver the child by their means, and Cesarean section reserved for those cases in which an absolute indication is present on the part of the pelvis.

Circumstances which Render the Elective Section Justifiable in the Interests of the Child Alone.

DR. EDWARD REYNOLDS, of Boston, summed up his experience and study of the subject in the following propositions: 1. The Cesarean section performed late in labor, or in the presence of infection of the uterus or other complicating constitutional conditions, has been shown by the experience of almost every operator who has tried it, to have so high a mortality as to be totally unjustifiable when performed in the interest of the child alone. 2. When a Cesarean section is performed on a healthy woman, early in labor, and under other otherwise favorable circumstances, for merely mechanical indications, it has, in skilled hands, no mortality other than the fractional percentage incidental to all considerable operations *per se*. 3. The inconveniences and high morbidity rate of symphysiotomy render it distinctly inferior to the section as an operation of choice, but it is an operation which, as compared to craniotomy, or prolonged and forcible high forceps work without it, involves almost no increased risk to life. 4. The induction of premature labor for contracted pelvis results in so high a fetal mortality as to be unwarranted when placed in opposition to the performance of the Cesarean section at the beginning of labor and in favorable cases.

The Technique of Cesarean Section.

DR. MATTHEW D. MANN, of Buffalo, first discusses the relative merits of the Saenger and Porro operations. He concludes that there is no rivalry, but that each has its proper place. The classical operation should be done in all elective cases, when the woman is in good health, the operation done in time, and all the conditions favorable. The Porro operation should be done when the uterus is septic; when gonorrheal infection is known to exist; when the uterus refuses to contract; when there are large fibroids, or ovarian tumors, which can not be removed without injuring the uterus. Small fibroids usually

disappear after pregnancy. Other indications for the Porro are: Disease of both ovaries; when the uterus is torn, or ruptured in labor; in cancer of the cervix; when the patient is greatly reduced and bearing the operation badly; in osteomalacia and bad atresia of the vagina.

The Place of Symphyseotomy as Contrasted with Section.

DR. CHARLES JEWETT, of New York City, presented the following conclusions: 1. Symphyseotomy is still a useful operation within a very limited range of pelvic contraction. 2. It is suited to conditions in which only very little additional pelvic space is required for delivery. 3. It is a valuable recourse, therefore, in cases in which forceps unexpectedly proves inadequate. 4. Axis-traction forceps, with the aid of posture, should always be tried before resort to symphyseotomy. 5. Its results would be much improved by restricting it to pelves with a conjugate of not less than 7.5 cm., 3 inches. 6. Under equally favorable conditions its total mortality should be no greater than that of Cesarean section. 7. When the pelvic space permits, it should replace Cesarean section in the presence of exhaustion. 8. It may be elected primarily as an alternative of Cesarean section, when the operator can be assured that the degree of obstruction is well within its safe limit. Here the choice of operation is largely a matter of individual preference. 9. Within its proper field symphyseotomy is better than Cesarean section for an operator of little experience in abdominal surgery.

Relative Merits of Bipolar Version with Slow Extraction and Accouchement Force in the Treatment of Placenta Previa.

DR. HENRY D. FRY, of Washington, D. C., stated that podalic version was discovered by Paré in the 16th century. The method was practiced and prompt delivery recommended in all cases of placenta previa. Until the discovery by Braxton Hicks, in 1861, of the bipolar method of version, subsequent literature added little of value except the use of the tampon; rupturing the membranes; and separation of the placental attachment as far as the finger could reach.

The mortality of these methods of treatment was from 25 to 50 per cent. for the mother, and from 50 to 80 per cent. for the infants. The main cause of death was loss of blood during the dilatation of the os, and from laceration of the site of the placental attachment. The advantage of bipolar version is the ability to successfully perform it with very little dilatation and with consequently less loss of blood. In placenta previa a fatal result is usually due to hemorrhage or sepsis. The hemorrhage is unavoidable and incident to dilatation of the os. Consequently the method requiring the least degree of dilatation necessary to perform version will naturally be expected to give the least hemorrhage. After dilatation be obtained in sufficient degree to insert several fingers, further continuance of the process by manual means is likely to endanger the integrity of the soft parts. In other words, the artificial dilatation sufficient to perform bipolar version is comparatively safe, while that necessary for the insertion of the hand and internal version is dangerous. The rapid delivery of the infant in accouchement forcé adds additional risk of rupture.

Scratch Marks on the Wax-Tipped Bougies in Diagnosis Calculi.

DR. HOWARD A. KELLY, of Baltimore, exhibited nine drawings made by Mr. Becker, showing scratch-markings made in wax-tipped bougies by calculi in the kidney and ureter, also pictures of the calculi and the bougies used were shown. A mixture of melted dental wax and olive oil, equal parts, was used to tip the renal catheters. This substance produces a smooth and highly polished surface, which on coming in contact with a stone is scratched or gouged in longitudinal striæ. The mucous membrane of the urinary tract cannot possibly affect the waxed surface.

DR. ANDREW F. CURRIER, of New York, said that the importance of this class of injuries is measured not merely by the immediate damage to the skull or the soft parts of the head, but by the possibility of death as a near or remote result, by the possibility of lifelong defect or deformity, and especially by such detrimental effect upon the structure of the brain that development is arrested or prevented, the individual manifesting mental incompetence in any degree between slight backwardness and hopeless idiocy. Unfortunately, post-mortem examinations in fatal cases from this cause are seldom made, hence our pathological knowledge of the subject is incomplete. The free use of the obstetric forceps has, on the whole, produced favorable results, but it is equally true that its untimely, injudicious or unskillful application has caused injury to many mothers and destroyed the lives of many children.

Tetanus Following Celiotomy, with Report of Two Cases.

DR. HENRY C. COE, of New York, in his introductory remarks stated that tetanus is such a rare complication of abdominal section, that many operators of large experience have never had a case. Statistics have shown that the disease is especially fatal after ovariotomy and hysterectomy. Tetanus is a rare cause of death after aseptic operations, as shown by reviews of various hospital records. Environment seems to make little difference. In Bellevue Hospital, where conditions are apparently most favorable to development of tetanus, this is almost unheard of, except as the result of wounds received before the patient is admitted. In the General Memorial Hospital, on the contrary, where the conditions are infinitely better, two fatal cases have occurred since the Hospital was opened (1887), and both in the service of the writer. In both cases tetanus followed clean operations, after a normal convalescence, and under conditions which were quite inexplicable.

DR. J. DUNCAN EMMET, of New York City, read a paper on "Myomectomy During Pregnancy with Delivery at Full Term."

The following officers were elected for the ensuing year: President, Dr. S. C. Gordon, Portland, Me.; first vice-president, Dr. George M. Edebohls, New York City; second vice-president, Dr. Edward Reynolds, Boston; secretary, Dr. J. Riddle Goffe, New York City; treasurer, Dr. J. Montgomery Baldy, Philadelphia. Atlantic City, N. J., was selected as the place for holding the next annual meeting.

AMERICAN ACADEMY OF MEDICINE.

Twenty-sixth Annual Meeting, held at St. Paul, Minn., June 1-3, 1901.

President Dr. S. D. Risley, of Philadelphia, in the chair.

Drs. L. Duncan Bulkley, of New York; Thomas D. Davis, of Pittsburg, and Dr. G. Hudson Makuen, of Philadelphia, were appointed the nominating committee. Forty-two new members were added to the fellowship.

The First Year Medical Curriculum.

DR. THOMAS D. DAVIS, of Pittsburg, said there had been great changes in the curriculum of the academical departments of all our institutions of learning—changes—not advances. He did not agree that many of the changes had been improvements in education. It would appear that the courses in arts and sciences had been arranged mainly to give a short cut into the profession rather than to broaden and deepen the foundations of true mental development. It is his conviction that no plan surpasses for true professional education foundation the old severe classical course, particularly valuable in developing the judgment and reason and forming the habits of application and mental concentration. Anything that can not show its advantages in dollars and cents has been placed in the background. He impressed the importance of the subjects taught in the last two years of a college course, and believes that the first-year course of a medical school should approach the last-year course in a college. A four-year medical course is not of itself an advancement in medical education. An entire rearrangement of the curriculum in our medical schools is necessary to correspond to the four years required. Botany should be taught, to give a more correct foundation for the vegetable materia medica.

DR. LAERTUS CONNOR, of Detroit, believed that colleges of all kinds were committing a grievous wrong to their students in not having them taught so to write that they could be understood clearly and forcibly, as well as in not teaching them how to talk when upon their feet. Without this training they are handicapped. If necessary, this instruction should be put in with the study of anatomy and chemistry. Manual training

in that their fingers might be able to follow out the students' perceptions was also advocated; as was also "a little bit of business training" which would make the physician more prosperous, and more reputable in the minds of those in business circles. A number of physicians are wrecked because they lack business training.

DR. V. C. VAUGHAN thought it a mistake that our students were not more frequently compelled to write theses, and that the abolition of the requirement was a backward step. Before a man studies medicine he should know mathematics through plain trigonometry. Also, the man who will get the best out of medicine must have a reading knowledge of French and German. He should have some knowledge of both Latin and Greek. The fact that a man has an A. B. degree may mean much or almost absolutely nothing. He thought it time that those interested in medical education in this country should force the literary school to give courses that properly lead to medicine. He expressed himself in sympathy with the law enacted by the New York legislature compelling every student to stay four years in a medical school, no matter what degree he may have.

DR. ALBERT GOLDSPOHN, of Chicago, heartily endorsed Dr. Vaughan's sentiments in regard to a knowledge of French and German. He felt that there is no possibility of a man keeping abreast with what the world affords unless he were a thorough student of German and French, from them getting the substance of what the rest of the world produces. A deficiency in the medical curriculum of to-day is the failure to appreciate the power of mind over matter, the want of a proper understanding of this psychologic part of man. The amount of instruction in histology is grossly defective. He felt that a good, thorough college course and then a four years' medical course likely to do the most good.

DR. EDWARD JACKSON, of Denver, thought that the study of logic and psychology as carried on furnished a very poor outfit, or a very insufficient guarantee of a logical mind or an ability to apply psychologic principles to general facts. In illustration, a baseball or billiard player learns to do a certain thing with perfect accuracy, promptness and ease, and yet knows nothing perhaps of the names or forms of classification or arrangement of the muscles by which he does it, still less of the nerves paths by which he accomplishes his purposes.

DR. L. DUNCAN BULKLEY thought that crowning evil of medicine, the advertising drug business, was due to faulty education in our medical schools. Another fault was in too great a crowding from minutiæ. He emphatically approved of the suggestion that students be required to write a thesis at the end of each year. He had seen too often in young men coming up for hospital examinations a want of concentration of thought.

Is the Demand for Reciprocity Based on Fact or Fancy?

DR. CHARLES MCINTIRE, of Easton, in this paper gave the results in the examination of reports of the various state boards of medical examiners for 1900, in order to form an estimate of the comparative number of physicians who seek to move from one state to another. The figures quoted in the paper give the entire number examined, the number failing, and of those failing, the number who were not graduates of the last class. A tabulated statement showed that out of 511 individuals, 292 could have had an opportunity of taking a state examination elsewhere. A considerable number failed, and were coming up for a second, only to fail again. It would be far from the truth to infer that of the larger number who were sustained in their examinations, the same proportion of older men presented themselves; at the same time, many such are included in those who received a license, and it will not be an overstatement to assume that the number of those who passed the examinations, who would have had the privilege of reciprocity extended to them, fully offsets the number who failed in the examinations, who had never made the effort to practice elsewhere. If so, there are at least 292 out of the total number examined who would have been able to avail themselves of the privilege of reciprocity, or about 7.5 per cent.

The Desirability of Reciprocity in Medical Licensure.

DR. J. N. HALL, of Denver, said that an experience of six years on the Colorado State Board of Medical Examiners demonstrated that many physicians of excellent repute seek a residence in that state because of illness, either personal or otherwise. Though such men are fitted to practice medicine they are rusty on the details of the foundation studies. Reciprocity between states having stringent requirements would be of the utmost benefit to men of this type. Reciprocity, however, should not be established, except among those states where requirements are essentially equivalent.

Reciprocity in Medical Licensure from the Standpoint of a Physician Who Changes His Residence.

DR. EDWARD JACKSON, of Denver, in this contribution, said that about one in every four or five physicians changes his field of practice from one state to another, at some time during his professional career. In making such a change the difficulty is not with the practical branches, but with passing the examination in what may be regarded as the preliminary studies—chemistry, anatomy, etc. The physician who removes across state lines can not justly be expected to keep better posted in those branches than the most of those who do not move. "Reciprocity" seems liable to be a waiting for others to do something rather than a practical measure of relief. The acceptance of the certificate of another state board, as evidence of a proper acquaintance with such preliminary studies, would remove the chief hardship. The main obstacle to this is fear of "lowering the standard." But the "standard" in many states is already "so high" as to favor evasion and special legislation letting in all sorts of irregular practitioners and to threaten the permanence of laws regulating medical practice.

Some of the Ethical and Sociologic Relations of the Physician to the Community.

DR. S. D. RISLEY in his presidential address showed that a most striking characteristic of the medical man is a sense of obligation to the community, that this ethical attitude finds expression, not only in the daily routine of his laborious professional service, but in a pronounced educational influence on all those lives which pertain to the healthfulness of the people and their socio-medical welfare; that this influence is signally exerted in the investigations and control of the relation which our defective classes sustain to the social body. Almost suddenly the student of social evolution has come to realize that through the altruistic spirit of our civilization a rapidly increasing percentage of degenerates have grown up in our midst, a fact which presents a serious and most complex problem for solution by the new century. Two suggestions are made for its arrest: 1, the legalization of means to prevent propagation of defectives by a sexualization; and, 2, by a wider education of the community regarding the importance of selection in the marriage contract and its control by the state. To solve it wisely and humanely will require the best efforts of the churchman and the physician and the statesman.

ILLINOIS STATE MEDICAL SOCIETY.

Fifty-first Annual Meeting held at Peoria, May 21-23, 1901.

President Dr. George N. Kreider, Springfield, in the Chair.

At a preliminary meeting of the Society, called by the Legislative Committee, several propositions were discussed. The question of a medical practice act and board of examiners was taken up, freely discussed, and a committee appointed to draft a bill providing for a Board of Medical Examiners in the State, the committee to consult such laws as are operating best in other States. A resolution was adopted requiring that a bill be introduced in the next legislature, urging that the true names and quantities of ingredients be plainly printed on each package of patent medicines and nostrums offered for sale, the Society being instructed to do what it can to further the passage of such bill provided the Legislative Committee believes it can be done without jeopardizing other desirable bills.

Resolved, That school of graduation shall be no bar to membership in the Illinois State Medical Society, providing such physician is recognized by the local society as qualified and not claiming to practice any exclusive system of medicine.

STATE SOCIETY JOURNAL.

After a free discussion, the following resolutions were adopted:

Resolved, That as far as practicable the *Journal* of the Society be made the official organ of the city, local, county and district societies in the state.

Resolved, That the *Journal* may accept all ethical advertisements under the same restrictions that apply to advertisements in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Resolved, That the Judicial Council select some member of the Society to act as Editor and Manager of the *Journal*, said Editor and Manager to be paid a reasonable salary out of the net profits to be derived from the publication; the amount of salary to be determined by the Judicial Council.

REORGANIZATION.

A committee of five, consisting of Drs. Graham, Pettit, McAnaly, Ochsner and Roskotten, was appointed to study the plan of reorganization as submitted by the Secretary of the AMERICAN MEDICAL ASSOCIATION, Dr. George H. Simmons. This Committee reported as follows: Your Committee would respectfully recommend the following, believing that this form of notice is sufficiently comprehensive to allow of all desired changes and yet sufficiently specific to meet the requirements of the constitutional provision relating to amendments.

Notice is hereby given in accordance with Article IX of the Constitution that, at the next annual meeting of the Society, to be held in May, 1902, such changes in the Constitution and By-Laws will be presented for consideration and adoption as will provide for reorganization on the basis of the following propositions:

1. That the work of the Society be divided into two parts, *scientific* and *general business*, the latter to include the nomination of officers, the control of finance, the conduct of the *Journal*, work relating to legislation and such other matters as may be referred by the Society, and to be conducted by delegates who shall be chosen by the constituent societies.

2. That membership in good standing in a county medical society, or, in the absence of such county society, then in a district or city covering the county of residence, shall constitute membership in the State society.

The Committee also recommended that the Society be requested to appoint a committee of three to formulate and adjust the proposed amendments during the coming year.

The report was unanimously adopted.

This meeting was the most successful in the history of the Society, both as regards its scientific work and attendance. The number of members who registered was a little over four hundred, and at one of the sessions nearly six hundred physicians were present.

OFFICERS.

The following officers were elected for the ensuing year: President, Dr. J. T. McAnaly, Carbondale; first vice-president, Dr. M. L. Harris, Chicago; second vice-president, Dr. J. W. Hensley, Peoria; secretary, Dr. E. W. Weiss, Ottawa; treasurer, Dr. Everett J. Brown, Decatur; editor and manager of the Society *Journal*, Dr. George N. Kreider, Springfield.

Quincy was selected as the place for holding the next annual meeting.

The following are the officers of sections:

Practice and Medicine—Chairman, Dr. R. B. Preble, Chicago; secretary, Dr. S. E. Munson, Springfield.

Surgery and Obstetrics—Chairman, Dr. E. E. Mammon, Bloomington; secretary, Dr. William E. Schroeder, Chicago.

State Medicine—Chairman, Dr. J. M. Wilcox, Clinton; secretary, Dr. W. K. Newcomb, Champaign.

NEW YORK OBSTETRICAL SOCIETY.

Regular May Meeting.

Dr. N. J. Boldt in the chair.

Two Ventral Fixations, One Ending in Rupture and One in Cesarean Section.

DR. ROBERT L. DICKINSON, of Brooklyn, read this paper. He said that although ventral fixation and suspension had been reported in some hundreds of cases, the two complications here presented were sufficiently rare to warrant publication. Cesarean section had been done eight times up to 1889, and rupture of the uterus was not common.

The second case presented four points of interest: 1. The uterus was more displaced, more upside-down, so to speak, with a cervix located higher above the promontory than in any case he could find reported, namely, at the third lumbar vertebra. 2. The stretching or distension was not, as usual, at the expense of the posterior wall chiefly, helped by contributions from the lateral walls, with a squat uterus as a result, but was largely from the right lateral wall. 3. Failure to recognize this new condition—lateral distension—prevented him from considering liberation of the adhesion in the seventh month. 4. Ventral fixation had taken place though suspension had been attempted.

Ventral Fixation for Prolapse; Rupture of Uterus; Death.

L. H., 35, German, married eight years, had had four children; the labors were easy, but severe laceration had occurred with a complete prolapse of the uterus and vagina. In February, 1899, a famous gynecologist did "ventral fixation, intra-abdominal shortening of the round ligaments, and vaginal plastics." At term a tumor was said to obstruct delivery and version and perhaps embryotomy was done. After three weeks of sepsis, she was sent in to his service at Brooklyn Hospital, in a sinking condition. Peritonitis with extensive exudate surrounded a right-sided rent running from external os to cornu, splitting the broad ligament and into the peritoneal cavity, four fingers wide. The uterine globe extends half way to the navel, the fundus is fixed to a scar above the pubes, and the posterior wall is thin and relaxed. The anterior wall is 2 inches thick and runs from the top of the scar half way back across the pelvis, and almost from side to side, even at this late date. The patient never rallied.

Cesarean Section for Ventral Fixation of Uterus; Death.

A delicate patient weighing less than one hundred pounds, had severe dysmenorrhea until after an operation by a celebrated gynecologist four years ago. She says that a one-inch cyst was removed from the left ovary, and that her womb was "tacked up in place." She was married in October, 1899, in her thirty-third year, and last menstruated on January 1, 1900. Nausea began in February and lasted throughout. On March 1 there occurred a threat of miscarriage with a marked flow of three days. Constipation, with somewhat persistent intestinal toxemia, troubled her throughout her pregnancy. The kidney action demanded constant stimulation and attacks of headache were frequent. In August he found the pelvic measurements ample, and abdominal examination showed the fetus in the right sacro-anterior position, of normal size. At the right side of the fetus and a little anterior to its highest point, the ovary could be detected; further forward the tube, and still further forward and downward the round ligament swept in the shape of a crescent from the middle of Poupart's ligament upward and forward. The distance between the ovary and upper end of the round ligament showed that the cornu was stretched. The right cornu being thus thrown forward, the left horn was searched for at the same level on the posterior and opposite side of the uterus, but such was the sensibility of the neurotic patient that anything like a satisfactory examination was impossible. It was therefore supposed very natural, that one end of the suspensory ligament which bowed this fundus forward was attached below at the scar above the pubes, and the other end above, at or behind the level of the tube. The portio vaginalis was in front of the promontory. When she had run beyond term, with slight labor pains at times during several days, he anesthetized her to make a complete examination and to induce labor by dilating and dragging the cervix forward. The right horn of the uterus was, as stated, high and to the front. The left ovary and round ligament, however, instead of being at the same level, lay along Poupart's ligament. The external os was crowded against the middle of the

first sacral vertebra. A strong double tenaculum was made fast in the anterior lip to pull it downward, and the longest finger was passed into the cervical canal. Instead of the usual length of four centimeters, he could pass his finger nearly 10 centimeters into the cervical canal. Though unable to reach an internal os, the finger tip passed to the first lumbar vertebra. The anterior wall facing downward into the pelvic was at least 4 centimeters thick. One-half hour of persistent effort with the strongest downward traction, the hand in the vagina and the finger in the cervix, failed to reach or stretch or bring forward the internal os. He worked to the danger point of rupture. No bag would stay within the cervical canal to stretch it. Professor Jewett saw her in consultation. On the same day no active pains intervening, a Cesarean section was done, at Brooklyn Hospital. The first child was delivered within 45, the second child within 70 seconds. The broad ligaments were seized by Dr. Westbrook. The first child lay in a right sacral position with its placenta in front of it completely covering the second child, which the tension and the sensitiveness of the uterine wall had prevented them from detecting. The second child was in the right occipital position with its placenta posterior. There was moderately free blood loss from the slackly contracting uterus, and some shock. As the incision in the uterus lay in the long axis of the mother's trunk, it ran from behind the right horn diagonally across the fundus to the front of the left horn, the major part of it being necessarily on the rear wall of the uterus. The patient was put to bed in fair condition, but died of shock within twelve hours. There was no internal bleeding, as demonstrated by the removal of the upper abdominal stitch. The girl weighed 5 pounds, 10 ounces; the boy 5 pounds, 4 ounces. They have gained nearly an ounce a day.

Band or Ligament Stretched by Enlarging Pregnant Uterus.

As bearing on the matter of ventral suspension and the stretching of the new suspensory ligament made at that operation, and running from the fundus to the anterior abdominal wall, he presented a series of diagrams from a case of adherent retroflexion. This case had a slender ligament on the opposite side of the uterus. The patient was a delicate little woman of 26, who had been treated with pessaries for fifteen months by a female who has no place in our medical directory, and had ulceration of the vaginal fornix and a peritonitis in the cul-de-sac. A year or more later she became pregnant. He drew attention to the way in which the uterus drags on the ligament which fastens the fundus to the cul-de-sac, to the development of the fetus in the bay window of the anterior wall, and to the final result wherein he showed the uterus in good position at term. He knew positively that the ligament was ultimately torn away because, after delivery, the uterus staid forward easily, and because, at a laparotomy ten years later, he found in the middle of the rear wall of the body of the uterus the old depressed scar of that adhesion. As a matter of comparison he showed a picture of a ligament as seen six months after operation. The patient was a neurasthenic with an aggravated retroflexion of an enlarged uterus and microcystic ovaries. As she was but 21, he resected the ovaries at the first operation, March 28, 1900, and sutured the uterus to the abdominal peritoneum with three sutures of chromicized gut. October 7, 1900, he did an abdominal hysterectomy for persistent pelvic pain. The cause was evident. The strip of apparently sound ovary, .5 cm. in width, left on each side, had grown to a size greater than that of a normal ovary. Moreover, the broad ligaments presented one of the very marked conditions of varicose veins. These suspensory ligaments are sufficient to hold the fundus forward, but readily pull away in the pregnancy. He had seen the ligaments suspending the uterus in five cases where the abdomen had to be reopened. In one a 6-inch ligament allowed the fundus to drop back to the mid sacrum. In four it did its work well.

In 37 of his cases of suspension whose later histories he had searched he found two pregnancies. The first was that of a highly nervous woman of 36, whose retroflexion was corrected by suspension after curetting, repair of cervix and parineum, and anterior colporrhaphy. The cystic left ovary was removed and a tiny fragment of the right ovary. A year later he had to empty her uterus for pernicious vomiting at the second month. The ligament permitted a 3-inch play of the fundus, and the suspension can not be credited with the need of abortion. He used two chromic gut sutures, through uterine wall and abdominal peritoneum. The second pregnancy was after suspension for fixed retroversion, in a woman of 32 years, who had had one child. Both ovaries were resected. Pregnancy began three and a half months after operation. Now, at her seventh month, the abdominal wall presents two prominences, one above and one below, the scar, and the round ligaments indicate that the fundus is bowed forward, yet the cervix is not high up nor is the anterior wall thickened within the pelvis.

DR. PAUL F. MUNDÉ said that the first case was operated upon by him two years ago. She had a complete prolapse and he did an operation that was rather unusual for him, making a broad denudation on each lateral wall and another on the posterior vaginal wall from cervix to vaginal orifice. He did this latter because there was a large ulceration present which he did not wish to leave. The denudations were closed with sutures, tying them as he went and replacing, at the same time, the vagina and uterus. The perineum was closed as high as possible. The abdomen was then opened for the purpose of performing uterine suspension. Three silk sutures were introduced, one at the fundus uteri, one just below the Fallopian tube, and the third on a level with the round ligaments. The round ligaments were also shortened by doubling them upon themselves and stitching them together with chromic catgut sutures. The patient made a good recovery and was discharged from the hospital with the uterus and vagina in absolutely normal position.

He had seen but one other case of pregnancy after ventral suspension for retroflexion where the woman went on to the fifth month, when intermittent uterine contractions occurred and she miscarried. He did not favor ventral fixation or suspension for backward or downward dislocations. The case that Dr. Dickinson reported was the first of the kind in his experience in which a serious accident occurred from subsequent confinement, and he doubted very much if, in the future, he should not continue to perform the operation which had done him good service for years, that is, the Alexander operation, which he had done in over 300 women and in whom he had seen many a pregnancy and a normal confinement with the uterus remaining in a normal position; for this reason and for its almost perfect safety he preferred the Alexander operation to any other method of suspending the movable retro-displaced uterus, when the appendages are normal.

DR. EGBERT H. GRANDIN said that it had always seemed to him where a fixation or a suspension was done and the sutures were passed posterior to the fundus of the uterus, that these women, if they became pregnant, would have their pregnancies interfered with and if they went to full term, would have difficult deliveries, because the uterus was placed in an exaggerated position of anteflexion. He passes the suture through the parietal peritoneum through the body of the uterus anterior to the fundus, and thence through the parietal peritoneum. He wished to secure a suspensory ligament of parietal peritoneum whereby the uterus could undergo normal movements and, in the event of pregnancy, the anterior position not being exaggerated, he had never seen the reason why the uterus should not rise and develop as it should normally and pregnancy progress to term without difficulty. This method of lifting the uterus to a higher level and maintaining it there relieves the congestion or varicosities of the broad ligaments, which are necessarily present when the uterus has been retroflexed for years.

DR. JOSEPH E. JANVRIN used two sutures inserted into the anterior wall of the fundus on a level with the beginning of the Fallopian tubes. Results have been excellent.

DR. A. PALMER DUDLEY did not believe in ventral fixation nor in ventral suspension if done in such a manner that it would interfere with Nature. He never used a buried suture. Nature never intended that the uterus should become fixed.

but that it should be supported; therefore, he supported it, and did so in this manner: Two sutures are used, passing them through the fundus of the uterus, scarifying the organ between the two sutures, and then closing the abdominal wound with the same sutures. In twenty days he removes the sutures and Nature forms the ligament which suspends the uterus. He thought the mistake made in this operation was in using a buried suture that can not stretch or accommodate itself to Nature.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment will be answered in these columns.]

Hemoptysis.

Lemoine, as noted in *Med. News*, advises a hot foot-bath and purgation with the following combination:

℞. Pulv. Sennæ
Sodii sulphatis, āā.....ʒss 16
Aq. bullientis, q. s. ad.....Oi 500

If the hemorrhage is subsiding use only magnesium sulphate.

For continuous small bleeding, he uses the following:

℞. Quininæ sulphatis.....gr. v 30
Pulv. ergotæ.....gr. viii 50

M. Sig.: One such capsule every morning.

In sudden large hemorrhages, omit the foot-bath and envelop the legs in iodized cotton and bathe the hands in hot water to dilate the peripheral vessels. He states that perchlorid of iron is useless and ergot not very good, but ergotol may be given hypodermically.

Treatment of Neurasthenia.

The following outline of treatment has been recommended in neurasthenia:

℞. Hydrarg. chloridi mitis.....gr. 1/10 006
Podophylli .....gr. 1/4 015

M. Sig.: One such capsule often repeated and followed in the morning with Carlsbad salts.

And as intestinal antiseptic the following:

℞. Sodii sulphocarbolatis.....gr. v 30
Pot. permanganatis .....gr. i 06

M. Sig.: One such capsule before each meal.

Or:

℞. Sodii sulphocarbolatis
Sodii benzoatis
Beta-naphthol, āā.....gr. v 30

M. Sig.: One such capsule before meals.

Baths, exercise, rest and proper diet complete the cure.

To Abort Furuncles.

℞. Sodii boratis .....ʒi 4
Acidi boracici .....ʒi 4
Acidi salicylici .....ʒi 4
Pulv. acidi tannici.....ʒi 4

M. Sig.: Apply the powder, sprinkled upon a yeast poultice to the affected part.

The Use of Elaterin in Ascites.

A. H. Bigg, in *Med. Record*, states the great benefit derived from the employment of elaterin in combination with suitable adjuvants and correctives. He employs the following in removing ascitic fluid:

℞. Elaterin .....gr. 2/3 04
Strych. sulphatis .....gr. 1/4 015
Glonoini .....gr. 1/20 003
Ext. digitalis .....gr. iiss 15
Caffeinæ citratis .....gr. x 66
Pulv. caryophylli.....gr. x 66

M. Ft. cap. No. x. Sig.: One capsule every three to six hours.

He emphasizes the importance of pushing the treatment until four to six copious evacuations per day are maintained, and until permanent relief is obtained. He combines with the elaterin, the heart stimulants in order to avoid the tendency to depression, which very frequently accompanies the active hydragogue cathartics.

Treatment of Epilepsy.

H. Campbell Thomson, as noted in *Month. Encyclop. of Med.*, states that when cases will not stand the bromid salts in high doses, because of the resultant toxicity developed, a 10 per cent. solution of bromin made up in oleum sesami may be given. This emulsion is prepared as follows:

℞. Gum. acaciæ .....ʒvi 192
Olei sesami .....ʒviii 256
Syr. simplicis .....ʒii 64
Ol. gaultheriæ.....m. xl 2 66
Aquæ .....ʒvi 192
Add
Bromi puri .....ʒii 69

M. Sig.: One tablespoonful night and morning, increasing as directed.

Treatment of Tinea.

In tinea involving the scalp in children, the following is recommended as a hair wash:

℞. Tinct. cantharidis 3iss 6
Tinct. capsici 3iss 6
Olei ricini 3ii 8
Eau de Cologne, q. s. ad.....ʒiii 96

M. Sig.: Use as a hair wash.

Or:

℞. Sodii boratis .....gr. xl 2 66
Spts. camphoræ 3i 4
Glycerini 3ii 8
Aq. aurantii q. s. ad.....ʒiii 96

M. Sig.: Use as a wash to the scalp.

Treatment of Pulmonary Tuberculosis.

The following prescriptions are noted in *Merck's Archives* for constitutional treatment of tuberculosis:

℞. Arseni iodidi
Strychninæ sulphatis
Hydrarg. chloridi corros., āā.....gr. i 06
Quininæ sulphatis
Iodoformi, āā.....3ii 8

M. Ft. pil. No. xl. Sig.: One pill three times a day.

Or:

℞. Ichthyol
Creosoti carbonatis, āā 3iv 16
Glycerini 3vi 24
Aq. menth. pip.....3iiss 10

M. Sig.: Ten drops, gradually increased to thirty drops in wine or lemonade three times a day.

Mercurial Stomatitis.

While a patient is taking large doses of mercury for any length of time, the physician must watch the condition of the patient's mouth, according to Dr. C. Bruhm, in *Berl. Klin. Woch.*, as it is usually in the mouth where the early symptoms of mercurial poisoning are first noticed. The patient should be required to rinse and cleanse the mouth frequently. If a stomatitis appears, pure tincture of myrrh may be applied to the gums. If the stomatitis is severe the gums should be painted with a 3 to 5 per cent. solution of chromic acid or a 5 to 10 per cent. solution of silver nitrate. In some cases it will be found necessary to discontinue the mercurial treatment for a certain length of time.

Treatment of Mercurial Sore Throat.

A. I. Liants, in *Phila. Med. Jour.*, states that to prevent mercurial angina, the patient should be instructed to wash the mouth with some antiseptic both before and after each dose. The sore throat is best treated with peroxid of hydrogen, while the ulcerations should be treated by the applications of silver nitrate, chromic acid and glycerin emulsion of iodoform.

Orexin Tannate as a Stimulant to the Appetite.

Zeltner, in *Phil. Med. Jour.*, states that he has obtained

splendid results in more than thirty cases from the use of orexin tannate. It was employed in the anorexia of phthisis in thirteen cases and proved very efficacious in most of them. In seven cases of uremia there was marked improvement in five. The advantage of the tannate over other preparations of orexin is that it causes no burning sensation in the stomach. It was given in 5-grain doses twice daily, two hours before meals.

Orexin tannate is a yellowish, odorless, tasteless powder, insoluble in water. Its general use is as an antiemetic, stomachic and to increase the appetite. It is contraindicated in excessive acidity of the stomach and gastric ulcers.

Headache Dependent Upon Ovarian Disease.

W. Sinkler, of Philadelphia, in *Sys. of Pract. Ther.*, advises the following:

R.	Ammonii bromidi	℥vi	24
	Ext. hydrastis flu.	℥ss	16
	Tinct. gent. comp.	℥iss	48
	Aquæ	℥iv	128

M. Sig.: One dessertspoonful three times a day in water.

In anemic headaches associated with uterine disorders he states that Hamilton recommends the following:

R.	Ammon. bromidi	℥i	32
	Tinct. cannabis indicæ	℥i	4
	Mucilag. acaciæ	℥iv	128
	Spts. menthol. pip.	℥ii	8

M. Sig.: One teaspoonful in water three times a day.

Treatment of Acne Rosacea with Adrenal Extract.

Munro, as observed in *Amer. Med.*, administers adrenal extract both internally and externally to cause constriction of the dilated blood vessels affected. Five-grain doses of the dried extract are given twice daily and afterward increased to six times a day. If giddiness or nausea occur the dose is reduced or the drug temporarily withdrawn. Locally the extract is applied as a paint by dissolving one tabloid in a dram of sterilized water and painted on at night after bathing the affected parts. The first application causes smarting and hyperemia, which soon passes off, leaving the parts anemic. In addition the face is bathed in hot water and the following lotion applied and allowed to dry:

R.	Sulphuris precip.	℥iss	6
	Zinci oxidi	℥ii	8
	Calamini	℥iii	12
	Glycerini	℥ii	8
	Aq. rosæ	℥vi	192

M. Sig.: Apply locally.

He states that the object of the above line of treatment is to prevent the formation of pustules. This treatment does not apply to the hypertrophic forms of the disease.

Treatment of Asthma.

The following is recommended by Eshner:

R.	Hyoscinæ hydrobrom.	gr. 1/6	01
	Strychinnæ sulphatis	gr. ¾	05
	Morphinæ sulphatis	gr. vi	36
	Sodii bromidi	℥vi	24
	Liq. potass. arsenitis	℥ii	8
	Tinct digitalis	℥iv	16
	Infusi gentianæ comp. q. s. ad	℥vi	192

M. Sig.: Two teaspoonfuls every three hours in water.

Treatment of Pertussis.

J. E. Godson, in *Birmingham Med. Rev.*, states that he has derived marked benefit by the use of creosote vapor as an inhalation. He uses it with steam by means of a kettle or steam-spray producer, by the use of a dry or moist inhaler, sometimes by sprinkling the creosote on a cloth hung up to dry in a room, or by vaporizing over a spirit lamp. He has found that the best results are obtained by the continuous inhalation, His method of treatment is as follows: Begin with the continuous inhalation of creosote by suspending cloths saturated with creosote solutions, both in the day and night rooms. The density can be regulated by varying the number of cloths. The chest and upper part of the spine should be treated by counter-irritation. Good air, warm clothing and wholesome food are necessary.

Medicolegal.

Nature of Drug Used as Abortifacient if Immaterial.—The Supreme Court of North Carolina holds, in the case of State vs. Crews, that there was no error in charging the jury that if they believed that the defendant advised and procured a certain-named woman to take turpentine with intent thereby to procure her miscarriage, it made no difference whether it would procure abortion or not, he would be guilty; that is it made no difference whether turpentine was a noxious drug or not if the defendant advised the woman to take turpentine with intent thereby to procure her miscarriage he would be guilty. At common law, it says, the noxious nature of the drug was essential, but under the North Carolina statute the essential ingredient in the offense is the intent with which the medicine, drug, or other thing whatsoever is used. The nature of the drug or article is material only as throwing light upon the intent. It is no defense even if the defendant could show that the drug would not in fact cause a miscarriage. The law deems no experiments in an effort to procure abortion innocent when the jury is convinced that the drug or other article was used with the criminal intent to procure such attempted abortion.

Sufficient Information Against Illegal Practitioner.—The Supreme Court of Nebraska holds, in Sofield vs. State, that the information on which trial was had in this case was not defective in substance although it omitted to state the name or names of the persons upon whom the accused, who was charged with the crime of practicing medicine without a license or certificate so to do, practiced his profession. The court holds that the averment that he "did unlawfully practice medicine to divers and sundry persons, whose names are to the county attorney unknown," was sufficient. Of course, it says, the county attorney was not required to set out in the information the names of the persons the accused treated, when such persons were unknown to such officer, and he so pleaded in the information. The case, it explains, is distinguishable from one where the information omitted the names of the persons treated, and failed to allege that their names were unknown to the county attorney. Furthermore, it holds that an information need not negative the exceptions of a statute which are not descriptive of the offense, and that, therefore, the information in question was not defective in failing to contain any negative averment relative to the exceptions contained in section 17 of chapter 55 of the Compiled Statutes of Nebraska bearing on this offense.

Physician's Certificate No Shield to Abuse of Writ.—A certificate of the attending physician of a child of 12 years of age, who had been sick with the measles, that she had so far recovered that removal from the premises would not injure her health, the Supreme Court of Iowa holds, in the case of Bradshaw vs. Frazier, was not a legal shield in an action for damages for an alleged abuse of process in the execution of a writ of removal in procedings against her stepfather causing her death, the evidence being conflicting as to when the certificate was issued in fact, and as to the examination made by the physician before issuing it. The court says that it was proper for the jury to consider it in determining the issues presented, but the court should not say as a matter of law that it was a complete defense. Nor does it consider that the contributory negligence on the part of the parents, and on the part of the relative with whom the child remained a few days after the ejectment, if it existed, as contended, would be a defense in such a case. Without a statute on the subject, it says that there can be no doubt that the law will more carefully guard the health of a human being than it will personal property; otherwise, it would not deserve the respect of the meanest inhabitant of the state.

Bills for Services in Cases of Contagious Diseases.—The Supreme Court of Michigan holds, in the case of Browne vs. the

Board of Supervisors of Livingston County, that, where a physician presented his bill to the board of supervisors as a bill for services rendered to indigent persons, and received an order and money thereon without protest for an allowed smaller sum than the amount of the bill, he could not afterward collect the balance claimed to be due him by presenting a bill for services rendered under section 4424 of the Compiled Laws of Michigan in caring for contagious diseases, and crediting thereon the amount received, although the services rendered were really of the latter character. In the same opinion, but in what may be called the case of O'Neil vs. the same defendant, it further holds that the duty of examining into each case to which he is called is imposed upon the health officer as one of the general duties of his office by section 4460 of the Compiled Laws of Michigan, and that for determining in such cases whether the patients are affected with a disease dangerous to the public health his compensation is fixed by section 4462, at not less than $2 a day, to be paid by the township, city, or village of which he is health officer. Section 4424, concerning contagious diseases, does not provide that the costs of these services may be recovered from the supervisors. That section covers expenses that are incurred after such determination. The question of whether the patient is afflicted with a disease dangerous to the public health must be first determined. The expense of determining this is not an expense incurred in taking care of the diseased person. If it is determined that the disease is dangerous, then the provisions of section 4424 apply to the case. For the former services, the examining into the case, the township, city or village must pay; for the latter, or caring for a person afflicted with a disease dangerous to the public health, the county must pay.

Right to Examine Body Does Not Extend to Dissection.—Certain policies of insurance against loss through external, violent, and accidental means provided that any medical adviser of the company should be allowed, as often as he required, to examine the person or body of the assured in respect to the alleged injury or cause of death. The question was raised whether this gave the company the right to have the body exhumed and have an autopsy of it after it had been buried, or, in other words, to dissect it. The United States Circuit Court, in Kentucky, holds, Sudduth vs. Travelers' Insurance Company, that it did not. It does not think that the ordinary and natural meaning of the words referred to, when fairly construed, would have such a meaning. To put it a little differently, it does not think that any ordinary person, in agreeing to the stipulation for an examination of the insured before or after death, would suppose he was agreeing to what would have been much more clearly expressed by the word "autopsy" or by the word "dissect." That is to say, it does not think that one would ordinarily suppose that the word "examine," as applied to the human body, either living or dead, would, by the force of the term, include, or by an insured, at least, would be supposed to include, the idea of cutting it up. The word "examine" may not definitely express the same idea to every person who sees or who uses it, but the court says that it is quite clear to it that it does not, in the clause of the contract under consideration in this case, include the idea either of an "autopsy" or of a "dissection," if there is any essential difference between those two words in this connection. While an autopsy, generally speaking, always includes an examination, the court does not think that an examination always includes an autopsy, or that it can be fairly held that the simple word "examine," as used in the policies sued on, would be accurately defined in the same words as those used to define either "autopsy" or "dissection," when endeavoring to arrive at the mutual agreement of the parties at the time they were contracting, particularly when construing policies for insurance against death from external causes only, and which ordinarily would only involve or require external inspection. It may be that the right to dissect a body, even after burial, is or would be an important right to the company; but that, the court adds, would make it all the more necessary for it to express it in language in no way ambiguous or doubtful, or which, in order to effect the company's purpose, would have to be extended beyond its ordinary import.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

American Medicine, May 25.

1 *Apoplexy and Hemiplegia. Harold N. Moyer.
2 *A Case of Intermittent Claudication. David Reisman.
3 Disease and Deformity of the Knee; Etiology, Diagnosis and Treatment. Daniel W. Marston.
4 *Chronic Heart Disease in Children relieved by Systematic Movements. John Madison Taylor.
5 Peripheral Venous Thrombosis in Cardiac Disease, with Report of a Case. J. A. MacGregor.
6 *A Hitherto Undescribed Reaction Following the Inoculation of Vaccine Virus. A Preliminary Report. Heinrich Stern.
7 Pregnancy Complicated by Fibroid Tumors. Cesarean Hysterectomy at Eighth Month. Mary Almira Smith.
8 *On the Use of Alcohol in the Treatment of Carbolic Acid Burns and Poisoning. F. Pirkner.

The New York Medical Journal, May 25.

9 Hyperacidity (Superacidity, Hyperchlorhydria, Superaciditas Chlorhydrica); a Clinical Study. H. Illoway.
10 *Nasal Condition Observed in the Aged. Beaman Douglass.
11 What Route Shall we Adopt in Examining the Eye Muscles? Alexander Duane.
12 *Ossiculectomy for Chronic Suppurative Otitis Media. J. A. Stucky.
13 The Importance of Early Recognition of Abdominal Infections. W. D. Hamilton.
14 Antistreptococcus Serum in Two Cases of Puerperal Septic Infection. A. J. Primrose.

Boston Medical and Surgical Journal, May 25.

15 *Municipal Care of the Consumptive Poor. S. A. Knopf.
16 Echinococcus of Liver and Perforation into the Lungs and Bronchi. William F. Gay.

Medical News, May 25.

17 *Some Notes on Medical Diagnosis. Wm. N. Berkeley.
18 *The Mineral Waters of Mt. Clemens, Mich, as Viewed and Compared with Those of European Watering Places. Richard Leuschner.
19 The Treatment of Chronic Purulent Otitis Media. James F. McKernon.
20 *Tuberculosis of the Iris. William F. Mittendorf.

Medical Record, May 25.

21 *Orchitis and Epididymitis in Typhoid Fever. Francis P. Kinnicutt.
22 *The Operative Treatment of Umbilical Hernia in Adults. Jos. A. Blake.
23 *The Borderland of Insanity: Where and What is It? Henry Waldo Coe.
24 Recurrent Oculomotor Paralysis: Report of a Case with Remarks. Wm. M. Leszynsky.

Philadelphia Medical Journal, May 25.

25 *The Surgical Treatment of Chronic Ulcer of the Stomach. A. W. Mayo Robson.
26 *Late Results of the Treatment of Inexorable Sarcoma with the Mixed Toxins of Erysipelas and Bacillus Prodigiosus. Wm. B. Coley.
27 *Trauma as an Exciting Cause of Paralysis Agitans. F. Savary Pearce.
28 Two Cases of Lobar Pneumonia Following Ether Anesthesia with Unusual Course. W. S. Schley.

St. Louis Medical Review, May 25.

29 The Operative Management of Retro-Peritoneal Abscess of Appendicular Origin. Gilbert Geoffery Cottam.
30 *Dr. Gaylord's Cancer Parasite—A Criticism. C. Fisch.
31 Antitoxin in Diphtheria. Robt. F. Amyx.

Cincinnati Lancet-Clinic, May 25.

32 *Gonorrhea in Women. Can its Frequency be Lessened? J. Ambrose Johnston.
33 *What is the Significance of Cervical Lacerations: Some Points Connected with Their Treatment. Chauncey D. Palmer.
34 A Case of Locomotor Ataxia. Mark A. Brown.

University of Pennsylvania Medical Bulletin (Phila.), May.

35 *A Trimanual Method of Percussion for the Detection of Cystic or Locculated Fluids in the Abdomen. John G. Clark.
36 *Recent Statistics on the Primary and Ultimate Results of Hysterectomy for Cancer of the Uterus. John G. Clark.
37 Diagnostic Curettage of the Uterus. Brooks M. Anspach.
38 A Unique Case of Sarcoma of the Uterus, Associated with Fibroma of the Inguinal Canal. John G. Clark.
39 Unique Pathological Changes in Two Cases of Uterus Bicornis Unicollis. 1. Unilateral Pyometra and Pyosalpinx. 2. Myoma. John G. Clark.

40 *A Practical Application in Abdominal Surgery of Scientific Investigations on the Function, Anatomy and Pathology of the Peritoneum. John G. Clark.

New York University Bulletin of the Medical Sciences, January.

41 *Gelatin as a Food-stuff. Graham Lusk.
42 *On a Method of Balancing the Acids and Bases of the Urine for the Recognition of the Pathologic Excretion of Organic Acids and the Approximate Determination of Their Amount. C. A. Herter and A. J. Wakeman.
43 The Alloxuric Bodies; Their Origin and Estimation. John A. Mandel.
44 *A Few Experiments Upon the Effect of Low Temperatures and Freezing for Various Periods of Time on Typhoid Bacilli and Other Varieties of Bacteria. Wm. Hallock Park.
45 The Development of the Conception of Disease. Horst Oertel.
46 A Brief Report of Two Interesting Cases of Bacterial Infection of the Urinary Tract. Wm. H. Park and Robert J. Wilson.

American Journal of Obstetrics (N. Y.), May.

47 A Visit to the Wards of the Promaternity Hospital: A Vision of the Twentieth Century. J. W. Ballantyne.
48 *Infant Feeding. Henry Dwight Chapin.
49 *Results of Treatment of Cancer of the Cervix, and the Unreliability of Statistics on the Same. J. M. Baldy.
50 *A Flap Operation for Atresia of the Vagina. George H. Noble.
51 Muscle-cell Sarcomata of the Uterus. William H. Weir.
52 Report of Two Additional Cases of Rupture of the Symphysis Pubis During Labor. Joseph B. De Lee.
53 Points of Similarity and Dissimilarity of Croupous Pneumonia and Pulmonary Tuberculosis in Young Children. Samuel S. Adams.
54 Cyclic Vomiting. George N. Acker.
55 Ovariotomy in the Eightieth Year. Wilmer Krusen.
56 Varicocele of the Broad Ligament. John B. Shober.
57 A Case of Infective Fever Resulting in Premature Labor, Peritonitis, and Death. John H. Girvin.
58 *Some Recent Operative Work for the Relief of Prolapse of the Uterus and Bladder. I. S. Stone.
59 Dermoid and Other Cysts of the Ovary. Samuel W. Bandler.

The Providence Medical Journal, April.

60 Diagnosis Between Appendicitis and Typhoid Fever. Maurice H. Richardson.
61 The Relation of Mental Content to Nervous Activity. E. B. Delabarre.
62 The Disagreement between the Physician and the Pharmacist. John E. Groff.
63 The Dangers of Some Common Eye Diseases if Not Properly and Promptly Treated. V. L. Raia.
64 Nitrous Oxid Anesthesia in General Surgery. Albert H. Miller.
65 Appendicitis at the Rhode Island Hospital 1891 to 1900. Donald Churchill.

Canadian Practitioner and Review (Toronto), May.

66 *A Case of Primary Abdominal Pregnancy. J. E. Pickard.
67 History of a Case of Smallpox. J. Godfrey.
68 Diphtheria vs. Acute Follicular Tonsillitis. John Gunn.

The Post-Graduate, May.

69 The Operation of Litholapaxy. James Pedersen.
70 Typhoid Fever in Children. Henry Dwight Chapin.
71 Artificial Respiration. Thomas E. Satterthwaite.
72 Report of Clinic—Hernia, etc. Dr. DeGarmo.

Buffalo Medical Journal, May.

73 *Experiences with the Recent Epidemic of Rabies in Buffalo, N. Y. Ernest Wende.
74 *Rabies. Mazyck P. Ravenel.
75 Notes upon the Rabies Epidemic in Rochester, with a Report of a Verified Death from Hydrophobia. George W. Goler.
76 Toxemia of Pregnancy. Montgomery A. Crockett.
77 A Brief Résumé of the Grosser Animal Nature and its Application in Medicine. (Concluded.) G. N. Jack.

Western Medical Review, May 6.

78 Endothelioma (Adenoma) of the Base of the Tongue Simulating a Struma of the Tongue. J. E. Summers, Jr.
79 Analgesia from Spinal Subarachnoidean Cocainization. John B. Murphy.
80 Psoriasis. E. J. Angle.
81 *Facial Paralysis. J. M. Aiken.
82 The Need of More Thorough Physical Examination of the Abdomen. Wilson O. Bridges.
83 Compensation and Failure of Compensation in Heart Disease. Millard Langfeld.
84 Cretinoid Myxedema, or Arrested Development Causing Degeneracy Treated by Desiccated Thyroid. M. H. Evans.
85 Two Cases of Appendicitis of Unusual Course. Herman E. Pearse.

Richmond Journal of Practice, April.

86 Pathology of Diseases of the Liver. M. D. Hoge, Jr.

Annals of Gynecology and Pediatry (Boston), May.

87 Malignant Disease of the Breast. J. Collins Warren.
88 *Pregnancy and Tuberculosis. M. Samuel Bernheim.
89 Chronic Laryngitis in Children. J. L. Goodale.
90 *Nausea and Vomiting During Pregnancy. J. Richard Taylor.
91 Empyema. Frederick G. Smith.
92 Emergency Hospital at the Pan-American. Herbert Shearer.
93 The Nature and Treatment of "Weak Back" in Women. Charles W. McIntire.

The American Practitioner and News, April 1.

94 The Progress of Surgery in the Nineteenth Century. Wm. O. Roberts.
95 The Causes of Death after Abdominal Operations. Louis Frank.

St. Louis Courier of Medicine, May.

96 The Mesogastrium—Omentum Majus. (Concluded.) Byron Robinson.
97 *Our Daily Bread. George Homan.

Annals of Otology, Rhinology and Laryngology (St. Louis), February,

98 *Myxoma of Larynx. Joseph S. Gibb.
99 A Case of Primary Tuberculosis of the Nasal Septum. William L. Ballenger.
100 *The Treatment of Laryngeal Tuberculosis at the Montefiore Home for Chronic Invalids (N. Y.). W. Freudenthal.
101 *Laryngeal Tuberculosis. J. Homer Coulter.
102 Acute Edema of the Larynx: Report of a Case. Franck C. Todd.
103 *On the Use of Camphorol, Menthoxol in Diseases of the Ear. F. C. Hotz.
104 An Exceptionally Large Myxofibroma (Occupying the Naso- and Oro-Pharynx and Having its Origin in the Posterior Third of the Middle Meatus). Redmond Payne.
105 A Case of Sternutation. Dr. Mosse.
106 Opacities of the Vitreous and Retinal Detachment Following Ethmoido-frontal Sinusitis. Dr. Broeckaert.

American Gynecological and Obstetrical Journal (N. Y.), May.

107 Chronic Appendicitis. Willis E. Ford.
108 *Vesico-vaginal Fistulæ. M. C. McGannon.
109 *Uretero-vesical Implantation—Three Cases. J. F. Baldwin.
110 *The Streptococcus in Gynecology. Guy L. Hunner.
111 Spinal Anesthesia in Cases Strongly Contraindicating General Anesthesia—A Report of Five Cases. Andrew J. Downes.

Cleveland Journal of Medicine, May.

112 Empyema of the Gall-bladder. Dudley P. Allen.
113 *The Physical Characteristics of the Pneumonia of Influenza. George W. Moorehouse.
114 A Case of Embolism of one of the Right Lenticulo-Optic Arteries Complicating Pneumonia, with Autopsy. Charles J. Aldrich.
115 Lead Poisoning. Hubert L. Spence.
116 A Case of Cardiopulmonary Murmur Illustrating the Importance of Differentiation. P. Maxwell Foshay.

Occidental Medical Times (San Francisco), May.

117 Diagnosis of Renal Calculus. F. B. Carpenter.
118 *The Medical Treatment of Renal Calculus. Wm. Watt Kerr.
119 *Remarks on the Surgical Treatment of Renal Calculus. Emmet Rixford.
120 Surgical Treatment of Rachitic Deformities. S. J. Hunkin.
121 A New and Convenient Arrangement of Bi-focal Lenses. George H. Powers.

Memphis Medical Monthly, May.

122 Gall-Stones: A Report of Seven Cases. Frank D. Smythe.
123 Some Notes on Antitoxin—Diphtheria and Streptococcus. C. M. Sebastian.
124 Report of Cases from the Eye and Ear Service of the City Hospital (Panophthalmitis, etc.), January and February, 1901. E. C. Ellett.
125 Acute Catarrhal Enteritis. D. M. Hall.
126 Bronchitis. B. T. Bennett.
127 Report of Three Cases of Acute Infantile Spinal Paralysis (or Poliomyelitis). J. G. Pou.
128 Treatment of Diseases with Static Electricity. W. T. Watson.

Journal of Cutaneous and Genito-Urinary Diseases (N.Y.), May.

129 Annular Lichen Planus: the Report of a Case of the "Ring-formed Papule," with its Histopathology. Martin F. Engman.
130 *Mercury in the Treatment of Lichen Planus—Report of Seventeen Cases—Disease Regarded as a Syphilide. Thurston G. Lusk.
131 *Condylomata Acuminata Linguæ (Venereal Warts of the Tongue). M. L. Heidingsfeld.
132 Diverticulum of the Bladder, Accompanied by Persistent Bacteriuria. George Knowles Swinburne.
133 An Apparent Case of Varicella in Utero. Joseph Grindon.

The Medical Herald, May.

134 A Case of Ectopic Pregnancy. Enos Mitchell.
135 Faculty Address at Commencement of Ensworth Hospital Medical College, at Tootle's Opera House, March 18, 1901. P. I. Leonard.

136 *Clean Surgery versus Mutilating and Unscientific Obstetric Procedures as Practiced Upon the Viable Unborn Infant. J. E. Summers, Jr.

Medical Dial, May 1.

137 Report of Cases. (Syndactylism, etc.) Charles W. Williams
138 *The Hospitals of Japan. Edward C. Register.
139 Some Practical Points in the Surgical Treatment of Dysmenorrhea. Southgate Leigh.

Southern Medical Journal, April.

140 Chronic Ulcers: A Clinical Report. J. W. P. Smithwick.
141 Opium Poisoning Treated with Permanganate of Potassium. Eustorjoi Calderon.
142 The Medical Treatment During the Adolescent Period. Edwin Rosenthal.

Georgia Journal of Medicine and Surgery, May.

143 Internal Derangement of the Knee-Joint, with a Report of Two Cases of Removal of the Internal Meniscus or Semi-Lunar Cartilage. George Ryerson Fowler.
144 Medical Supervision of Schools and School Children. Edgar J. Spretling.
145 Report of an Unusual Surgical Case (Complicated Fracture of Leg). Hugh Burford.
146 Ophthalmia Neonatorum from the Standpoint of the General Practitioner. M. L. Currie.
147 Hypertrophic Elongation of the Cervix Uteri, with Complete Eversion of the Vagina from Fibroid Tumor of the Cervix. Restoration by Supravaginal Amputation of the Cervix and Inversion of the Vagina. George Henry Noble.
148 Prognosis in Chronic Non-Exudative Nephritis. Norman C. Varian.

AMERICAN.

1. **Apoplexy.**—The definition of apoplexy is discussed and the common use of the term criticised by Moyer. The importance of distinguishing cerebral hemorrhage from thrombosis and embolism from a practical point of view is emphasized and their diagnosis pointed out. It is impossible in many cases to distinguish between the conditions. When in doubt, treat the case carefully, avoiding those measures which may do more harm than good, and he strongly condemns the use of strychnin and ergot. The diagnosis, he points out, will depend largely on the previous history, the suddenness of the attack, the co-existing conditions, etc.

2. **Intermittent Claudication.**—This disorder, first mentioned by Charcot, consists of an intermittent inability to walk, due pathologically to a deficiency in circulation, largely connected with obliterative endarteritis of the peripheral arteries. Its etiology coincides largely with that of arterial sclerosis, which is the principal anatomic condition found in the disease, but as arterial sclerosis is common and intermittent claudication rare, other factors must take their part, and these are presumably vasomotor disturbances, which may in turn be connected with endarteritic changes in the vasa nervorum. The majority of patients with this intermittent claudication are Hebrews, and excessive users of tobacco. After reporting a case, Reisman suggests as treatment a diet largely vegetable; exclusion of alcohol, tea, coffee, etc.; the use of alkaline mineral waters, moderate exercise, avoidance of fatigue, protection from cold and dampness, galvanism, and for drugs iodids and nitroglycerin and cardiac stimulants of the strophanthus order. His case was benefited by the use of bromids and nitroglycerin.

4. **Chronic Heart Disease in Children.**—Taylor gives the details of his experience in the treatment of chronic heart disease in children, especially noting the fact that in many cases apparently hopeless conditions may be no detriment to a long life, and that much may be done to restore cardiac activity, as is shown by the results of training. Physicians are often ignorant on these points, and often give worse advice than practical trainers. What is true of boys is still more true of girls, who have a complex circulatory apparatus made for special strain during periods of gestation. The advantages of the exercises are the prevention of congestive developments in the liver, kidneys and lungs, keeping up the functions of the skin and of the nervous system and generally assisting in healthy metabolism. While he believes in rest in bed in marked cardiac disorders, he believes that when the condition improves there comes a time when some activity may be commenced under guidance and rule, preventing irregular and damaging results. No harm can come from employing certain systematic procedures, passive movements by the operator twice a day when absolute rest is still required, and as the condition improves the use of gentle massage of the limbs, and later of the trunk, twice or thrice a day. Still later forced breathing to exercise the diaphragm and lungs, teaching the child to lift the shoulders and make them flexible by placing the clasped hands on top of the head and making repeated efforts at raising and lowering the scapular muscles. While still lying on the back, active extensions of the limbs in different directions may be made, and as the condition improves the operator may meet these extensions with a certain amount of increasing resistance, watching the effect, however, on the pulse and circulation. Later the child may be allowed to sit up and the exercise carried still further. Neck exercises are of great advantage, moving the head, and the muscles of the upper thigh and hips should receive special attention in cases of weak heart and lungs. Later more complex movements suitable for more vigorous children may be employed.

6. **New Vaccine Reaction.**—A new reaction recently noticed by Stern consists in the improvement following vaccination in lithemic and rheumatic disorders. He found this out at first accidentally and then looked up a number of other cases where the same results occurred. Later he vaccinated, with their consent, two more sufferers from lithemia, the vaccination not being necessary as a protection from smallpox, and in both with benefit. All the cases had one symptom in common, pain, though they were, clinically speaking, cases of uricacidemia, rheumatism and neuralgia, and he thinks there is enough evidence that the vaccin virus had a positive influence. He suggests as an explanation that the reaction is a secondary one. The system in its endeavor to rid itself of the virus develops increased oxidizing qualities. He admits the possibility that the symptoms may be due to bacterial activity, and the reaction also to the influence of cytorhyctes variolæ, the variola-vaccina-sporozoa. He does not offer these facts as showing that vaccination is a specific for pain, for it is not, but simply to call attention to its possible occasional influence.

8. **Carbolic Acid.**—Pirkner reports a case of a child who swallowed a tablespoonful of pure carbolic acid. He was called in about half an hour after the dose was taken, and administered absolute alcohol, which apparently relieved the child, but was too late to cure it entirely. He thinks, however, that this case alone is sufficient evidence of the antidotal effect of alcohol on the amount of carbolic acid that remained in the child's stomach when it was given. He suggests that there may be a possible danger in the use of alcohol when a certain amount of carbolic acid has been absorbed, and he would advise under similar conditions not to repeat the dose of alcohol if it can not exert its specific effect because of the large amount of chemically unchanged carbolic acid in the circulation.

10. **Nasal Conditions in the Aged.**—Douglas has examined with special care all cases above 45 years of age which came under his observation in his clinics, and finds a surprising number of cases with nasal pathological conditions, which are not shown by any subjective symptoms. Five cases are reported. He theorizes on this phenomenon and suggests a possible explanation. It would appear, he thinks, as if nasal symptoms were not so much caused by these pathological conditions as by associated ones of disturbed circulation and nerve irritation. This draws our attention to the fact that chronic congestive interference with circulation, lymphatic obstruction and neurotic temperament are very important factors in nasal cases, and the symptoms may not disappear with the mere mechanical removal of the lesions.

12. **Ossiculectomy.**—The anatomical construction of the middle ear favors pathological conditions, and the question arises whether, in view of the great importance of these conditions, radical conservative treatment is most advisable. Stucky has removed necrosed ossicles in twenty-nine cases with results justifying the operation. In only two of these was the

stapes removed. The treatment outlined is as follows: After removing the ossicles and all or part of the tympanic membrane and having the cavity thoroughly curetted, the anterior attic wall is removed, and we have free drainage and can make remedial applications which could not otherwise be done. He thinks this is the most conservative and satisfactory procedure and better than the radical surgical treatment, at least as a first resort.

15. **The Consumptive Poor.**—Knopf reviews the statistics of the mortality of tuberculosis, and calls attention to the fact that consumption is not a hopeless disease, though in the unhealthy conditions of the city tenements, its prognosis is bad. The condition, also, of the poor in cities is especially unfavorable to recovery. He points out the economy of early care in these cases, and insists on the educational advantages of sanatoriums in a hygienic way. He thinks there is little danger of such institutions diminishing the value of real estate, and gives an instance where the opposite result occurred.

17. **Medical Diagnosis.**—Berkeley reviews the various points in regard to diagnosis, the importance of the instruments of precision, and of the use of the microscope; the avoidance of brilliant snap diagnoses, which he thinks are risky; the necessity of close, rigid examination, which he goes over in detail, and finally the need of logical judgment from the facts obtained. The details of the article are numerous and the reader is referred to the original.

18. **Mt. Clemens Springs.**—The medicinal waters of Europe are noticed, many of them in more or less detail, and compared with those of Mt. Clemens. Leuschner claims that the latter have the combined properties of the waters of Aix-la-Chapelle, Wildbad, Kreuznach, Oeynhausen and Nauheim. He maintains that with the scientific management of the waters of Mt. Clemens, many if not all the benefits obtained in these other localities would be readily obtained. He shows how absorption takes place through the skin and into the general circulation, and the concentration of the Mt. Clemens salines is a distinct advantage. The value and efficacy of the Mt. Clemens sulpho-iodo-bromo-salines have been amply established in rheumatic, gouty and syphilitic conditions, and skin diseases, nervous disorders, alimentary catarrhal affections, diabetes, etc.

20. **Tuberculosis of the Iris.**—The different forms of iris tuberculosis are described by Mittendorf, who finds it sometimes a primary and sometimes a secondary affection, which may be divided into two classes, the solitary and multiple forms, and the latter may be divided again into chronic and acute. As a rule, it is a disease of youth or middle life, and one eye is usually alone affected. In the first class described there is generally tuberculosis in the general system, not necessarily, however, of the lungs, and it is characterized by one or more grayish nodules developing in the iris, early appearance of ciliary injection and intense pain in the eye and forehead, and synechiæ. The disease rapidly advances and the vision becomes impaired, the humors become turbid, the whole eyeball may become filled with tubercular matter and enucleation is likely to be required. Another form occurs in the early stages of pulmonary tuberculosis, and runs a much slower course. It may last several months, and be entirely relieved with the general improvement of the patient. The third form is more serious, and usually leads to great impairment of the vision and loss of the eyeball. There is a single tubercular deposit at the bottom of the anterior chamber, involving the ciliary body, which is very painful, and as the tumor develops it presses on the cornea, which soon breaks down. Even this disease, however, may yield to treatment, and partial recovery from the disease be obtained. As regards treatment, he thinks hot water applications better than cold. Morphin may be required. Iridectomy may be suggested, but he does not think it promising as an operative measure, and if the disease appears resistant after the usual internal and local measures, very often a complete removal of the affected eye is advised. While this may not prevent the infection of the other organs, it removes the principal cause of the danger and relieves pain. A strong solution of atropin is advisable, and it counteracts to some extent the effects of the morphin given to relieve the suffering. Three cases are reported.

21.—See abstract in THE JOURNAL of May 18, p. 1415.

22. **Umbilical Hernia.**—After reviewing the various operations and the conditions which require them, the author remarks that slitting the sheath of the recti and union in several layers is the best for small hernia. Of the various methods of doing this, he thinks lapping the abdominal wall is the method particularly applicable in cases where there is stretching of the linea alba with separation of the recti. It consists of the division of the linea alba above and below the sac in the median line for the necessary distance, with or without incision of the ring and a portion of the linea alba. The entire wall on one side is then lapped in front of the other and there sutured, so that the ventral surface of one side is in contact with the dorsal surface of the other. This method has been tried by him in three cases since last September, and he credits the earliest record of this operation to Sapiejko, in December, 1898. Some of the more apparent advantages of the operation are: 1, the doubling of the abdominal wall at the hernial site; 2, the breaking of the lines of suture; 3, the broad surfaces for union; 4, the obliteration of the separation of the recti, and the reduction in the size of the abdomen. Its field is really not limited to herniæ proper, but also includes the treatment of pendulous abdomens, and of enteroptosis due to laxity of the abdominal wall.

23. **Borderland of Insanity.**—Coe's article is a general review of the early manifestations of mental derangement, when the condition has hardly developed into acute alienation. Under this head he classes insomnia, eccentricity, lack of control of emotions and passions, imperative conceptions when they go beyond the safe degree, obsessions, and sexual aberrations and excesses to which he gives considerable space.

25.—See abstract in THE JOURNAL, May 25, p. 1491.

26.—See extract in THE JOURNAL, May 25, p. 1490.

27. **Paralysis Agitans.**—The effect of commotio cerebri as a cause of definite organic changes in the neuron has been brought to Pearce's attention in a case of Friedreich's disease, and he has noticed also conditions of tremor in cases not otherwise hysterical recovering after rest and nutritional measures. He has been led to suspect, therefore, that disorganization of the glia and neurons arise from undue commotion in the nerve centers. He brings up paralysis agitans particularly as a disease of indefinite pathology, though interstitial plaques of sclerosis and hardening of the blood vessels are known to occur, and he says he has no doubt that not a few cases of this disease date their onset of actual tremor from the time of a fall or other concussion. He would say that the older the case, the more likely is trauma to be its cause, and even senile tremor may date from an injury. The excitation of the afferent axons may cause an increase of irritation of motor neurons, the reflex message being carried back accentuated, producing tremor of the muscles, and therefore of the extremity involved. Two cases are reported, which seem to him to illustrate his views, and he says: The conclusions which seem to be the more definite as regards trauma as an exciting cause of paralysis agitans, are that the late the origin of the disease, is trauma more apt to have been the exciting cause; in any event, it is more apt to produce an aberrant type of the malady, especially when the insult to the nervous system has been primarily in the periphery of the body rather than of the central neurons.

29.—See abstract in THE JOURNAL, Jan. 12, p. 128.

30. **Gaylord's Cancer Parasite.**—Fisch criticizes Gaylord's paper and work, declaring his methods faulty and his results inconclusive and unsatisfactory. He says he would advise him to search for the same body in young granulated tissue, and if he then uses the old safranin-gentian method or Flemming material, or one of the more recent methods of Benda, he thinks he will not hear again of the parasite.

32. **Gonorrhea in Women.**—Johnston reviews the facts showing the dangers of this disease, and calls attention to the

importance of educational methods in combating its extension.

33. **Cervical Lacerations.**—The dangers of lacerations of the cervix from hemorrhage, sepsis, etc., during or shortly after parturition, the delayed involution which is induced in these cases, the dangers of cicatricial tissue becoming malignant, are considered by Palmer. He advises a primary trachelloplastic operation, which he thinks is one of the most satisfactory operations in surgery. He suggests that it is possible that more deliberation in labor cases, and the avoidance of unnecessary interference with instruments, etc., may be effective in diminishing the frequency of these injuries. The importance of their early recognition at the time of their occurrence, and their correction at this time are dwelt upon, and he also calls attention to the frequency of imperfect results, like, for example, the want of restoration of normal symmetry in the operation, the production of artificial stenosis, and the leaving of unhealthy cicatricial tissue.

35. **Trimanual Abdominal Percussion.**—For the detection of blood in obscure cases, Clark has employed for two years past the trimanual method, which he here illustrates. On bimanual examination of the pelvic mass of questionable consistence, the intestines intervening between the anterior abdominal wall and tumor may dissipate the percussion impulse of the abdominal hand, and although fluid may be present, a wave of sufficient intensity to be felt by the vaginal touch is not induced. To overcome this difficulty the tumor mass should be confined as closely as possible between the two examining hands, while the percussion is made by an assistant. With light taps even small collections of fluids may be detected by the quick, responsive, pulsatile wave passing from the abdominal to the pelvic mass. He has systematically employed it in the differential diagnosis of abdominal tumors. He finds this method of singular value, and has looked in various text-books to see if it has been hitherto described, but finds no mention of it.

36. **Uterine Cancer.**—The statistics from various series of the results of hysterectomies for cancer of the uterus are studied by Clark, and he concludes that any operation, no matter how grave it is, which offers the highest percentage of cures is advisable. He does not think glandular metastases as frequent as he formerly considered them, and while he believes that the glands should be removed, he thinks the condition of the patient should be considered beforehand. His rule, therefore, is to complete the chief part of the operation, viz., hysterectomy, and then, if the patient's conditions justifies, the iliac glands may be dissected out. Even then he thinks the removal of prognostic rather than of curative value, for if they are involved he does not think the patient will escape a recurrence of the cancer, but if they are free a favorable opinion can be given. Suspicious cases of hemorrhage about the menopause should not be allowed to go longer than one month at the most without a thorough examination. If an early diagnosis is made and operation performed, we have a greater per centage of cures. It is only by careful microscopic examination of curettings that a definite decision can be made.

40. **Abdominal Surgery.**—The researches of various authors on the anatomy, physiology and pathology of the peritoneum are first noticed by Clark, who gives a rather full abstract of the comparatively recent article by Wallgren in regard to streptococcal infection of the peritoneum, and sums up the following as the most important practical points contained: 1. Great decrease in the number of micro-organisms within an hour, both through their intraperitoneal destruction and through their rapid absorption into the general system where they are dealt with. There is, therefore, no possibility of limiting septic matter through gauze or glass drainage to any free surgical field within the abdomen. 2. Vigorous streptococci which remain behind develop within six hours a repellant or destructive quality for leukocytes, and the lethal fight is therefore inaugurated and well underway before drainage, as ordinarily employed, can possibly exercise any beneficial action. In many cases, therefore, where drainage is employed the patient recovers in spite of, and not because of it. Based upon practical experience in a large series of abdominal sections, and sustained by his own and the above detailed scientific investigations, he believes, therefore, that the thorough irrigation with normal solution of the peritoneal cavity after abdominal operations for the purpose of removing all possible débris of infectious matter, and then leaving behind large quantities of salt solution, is the most effective preventive measure we have against post-operative peritonitis.

41. **Gelatin as a Food-Stuff.**—Gelatin is recommended by Lusk as an accessory food-stuff in diseases where there is a high tissue waste, since it protects the body from too large a proportion of proteid waste. Small quantities are nearly as beneficial as larger ones. It can never be fully substituted for proteid food.

42. **Acids and Bases of Urine.**—The term balancing the acids and bases of the urine as used by Herter and Wakeman refers to determining the basic values of the chief known bases of the urine and comparing them with the corresponding basic values of the chief known acids of the urine, thus demonstrating the departure from the state of health as shown by failure of the known acids to balance the known bases, or the excessive bases, in case of acid intoxication. The method is described in detail with formulæ which can not be reproduced, and the reader is, therefore, referred to the original.

44. **Low Temperatures and Bacteria.**—Park has experimented with typhoid bacilli in ice at different periods, also in liquified air, and gives the results. The practical points appear to be that these and probably some other bacilli are capable of retaining their virulence and vitality for considerable time in a condition of extreme cold. The bacilli of typhoid patients thrown out with disinfection might easily be infectious until spring and typhoid bacilli after a thaw be carried in water for long distances. It is difficult to say just how long ice from infected water may remain dangerous, but the longer it remains frozen the less the danger. In spite of the rather rapid purification due to freezing, we should discourage the use of ice from infected water unless it remains frozen for at least five months. After mid-summer one could rule out ice infection from natural ice absolutely unless contaminated in shipping. Liquid air seems to diminish rapidly the living activities of typhoid, colon and hay bacilli and staphylococci, the last two, however, having greater resistance than the two first.

48. **Infant Feeding.**—Two questions to be answered are: 1. How can we get cow's milk which is clean? and 2, how can we modify it to have it resemble mother's milk? About 200 species of bacteria have been grown on milk and about 20 produce lactic fermentation. The accurate differentiation of all these bacteria is impossible, but they can be broadly divided into lactic acid forms and saprophytes. The pathogenic bacteria are introduced through water used in cleansing the vessels or through persons handling the milk. Lactic-acid bacteria come from the teat, and the first few streams of milk contain the largest number; it is best to throw these away. The putrefactive bacteria come from the manure on the udder or teats of the cow, which should be kept as clean and disinfected as they can be. Chapin remarks that there is a great amount of unnecessary fear about tuberculosis in milk. Tubercle bacilli, he says, do not grow well in milk, and while the disease may be attributed to it, the fear has been greatly exaggerated. When the milk has been collected with all the necessary precautions as to the washing of the cow and cleanliness of the milker and utensils, it should be rapidly cooled, as microbes do not grow readily in milk below 50 F. Last summer milk was collected in Illinois, New Jersey and New York, rapidly cooled, aerated and sent to Paris, and drank there during the Exposition as better than that produced near at hand. When we get a clean milk we are on the right way, but anything that masks the effect of the dirt in the milk is bad. The two principal chemicals are boric acid and formaldehyde. Pasteurization is not always a good practice, and the author never employs it excepting in very hot weather when he can not be sure of the milk. The approximate difference between human and cow's milk is stated and details given as to changes that are required. The milk should be put into the bottles in

the dairy, and not in the shop in town, and the less it is handled the better. If it is kept from 12 to 24 hours nine-tenths of the butter fat is on top, and this is an aid to dilution. He objects to the use of the siphon and believes in the use of the dipper. The different kinds of cows and the quality of their milk are discussed. The Guernseys and Jerseys give 5 per cent. butter fat, the average-grade 4 per cent. butter fat, and the Holsteins and common stock 3 per cent. It is better to get the average from twenty or thirty cows rather than the milk from one, and he is just as willing to use the 3 per cent. milk as the 5 per cent., as it is more uniform. The details of making up the proper dilution are given and tables to aid in the estimation. He thinks the less we manipulate the milk for the baby the better, and objects to centrifuging to get thick cream; the use of gravity cream and the dipper is better. There are two types of milk, the hard-curdling and the soft-curdling milk. Cow's milk is of the hard-curdling and woman's is of the soft-curdling type. This is the great difference to be borne in mind. Decoctions of cereals like barley water or wheat-flour gruel are effectual diluents, better than simple water. He generally orders his gruel to be made as follows: Two tablespoonfuls of wheat or barley flour, made into a paste with cold water and added to a quart of water, then boiled for fifteen minutes, and with a little salt we have ordinary gruel. Wheat is as good as barley, though barley may be better if the baby has diarrhea. For constipation use oatmeal gruel. He dextrinizes this gruel, preparing his own diastase by taking a tablespoonful of ordinary malt barley in a teacup with about two tablespoonsful of water and put in the refrigerator over night. In the morning one tablespoonful of thin fluid that looks like tea is taken off, and contains active diastase. After putting it into the gruel, in a few moments you can see it become thin. It should be put in after it is cool enough to taste. When it stands it separates into the clear, which is soluble starch, and the part underneath cellulose. In this method we have a sufficient aid to digestion of cassein of cow's milk, which makes the hard curd soft and flocculent, and the nutritive value is improved by the digestion of starch. But diastase can be bought if desired, and he has used a preparation, cereo, a glycerite of diastase, one teaspoonful of which will digest a pint of gruel or a saucer of oatmeal in five minutes. This does away with the objection of those who say a baby was not meant to digest starch; neither was a baby intended to digest cow's milk.

49. **Cancer of the Cervix.**—Baldy says this disease is universally conceded in its inception to be a local one and the hope of a cure rests in an early removal of the disease. In spite of the extravagant claims of surgeons, especially the Germans, the results have not been so good. Kelly's work in the Johns Hopkins Hospital, as reported by Cullen on cancer, bears out this conclusion. It is claimed by these statistics that about 20 per cent. of patients out of a total of 73 are cured. This means, of course, 20 per cent. of those operated upon. In studying the tables, however, it appears that 68 patients of cancer of the cervix have been refused operation. In other words the cases have been picked cases. The percentage then drops at once to about 10 per cent. Including in this every case of possible false diagnosis and doubtful or borderline cases, and so on, the 10 per cent. falls away. He thinks, therefore that the statistics of the Johns Hopkins Hospital show a cure of 5 per cent. or less, accepting them at their best. This is in accordance with Baldy's own experience.

50.—This article was abstracted in THE JOURNAL, XXXV, p. 1426.

58. **Prolapse of the Uterus and Bladder.**—This condition is, according to Stone, often ignored as regards its treatment, which he thinks is a great mistake and due to the want of appreciation of existing pathologic conditions and the necessary utilization of changed structures in the tissue for their relief. Our first aim should be to prevent the descent of the uterus and bladder. The recto-vaginal fascia and that between the uterus and bladder, and bladder and vagina, is always permanently over-stretched in bladder prolapse. He compares this pelvic outlet with the inguinal ring and divides it into two planes, corresponding to the external and internal abdominal ring. The upper contains the anterior surface of the broad ligament and the lower what is called the pelvic floor. The operation proposed by the author is described as follows: After the patient has been prepared for the operation and placed in the lithotomy position he incises along the median line at the crest of the cystocele through the thickness of the vaginal wall. This incision, if about 2 inches in length, gives ample room, and can be enlarged if desired. The thickness of the wall can be easily estimated and can be divided with the scissors without fear of cutting into the bladder. The sides of the incision are caught with forceps and pulled apart, when the white cellular tissue shows, and the separation may be continued. With a gauze sponge we can rapidly separate the flaps from the bladder as far on each side as may be required. In prolapse of that portion of the vaginal wall under the urethra, a free hemorrhage can be avoided if we do not separate them too far laterally. There is a most satisfactory use of this method in loss of control of the neck of the bladder. The operation in such cases is merely removing the urethrocele, and results excellent as far as his experience extends. The incision extends the entire distance from the meatus to the cervix uteri when we operate for prolapse of the bladder. When the bladder is pushed away from the vaginal wall through a short incision first made, the opening may be extended at will with the scissors and the bladder pushed beyond danger of injury. With two pairs of forceps he holds the edge taut and can see how much tissue can be removed. In a case prolapsed sufficiently to allow the uterus to reach the floor of the pelvis or the cervix to nearly reach the uterus, we may expect excellent results after this operation without opening of the abdomen or resorting to utero-suspension or fixation. He gives diagrams showing the relative position before and after operation of the vagina and bladder, the latter being folded over on itself to a certain extent.

66. **Primary Abdominal Pregnancy.**—In the case reported, Pickard claims to have found the child fully developed, weighing 8½ pounds in the abdominal cavity with normal uterus, the ovaries and the Fallopian tubes normal and intact and no signs that the ovum had ever entered the Fallopian tubes or that the pregnancy had ever been tubal. He concludes that he had in the case reported a primary abdominal pregnancy.

73.—This article appeared in THE JOURNAL of April 6, p. 940.

74. **Rabies.**—Ravenel gives the history of rabies and also the discovery of the lesions in the ganglia by Van Gehuchten and Nelis, which he thinks is one of the most important facts in the history of the disease. He ends his paper with the following conclusions which he thinks are justified: 1. When present, the capsular and cellular changes in the intervertebral ganglia, taken in connection with the clinical manifestations, afford a rapid and trustworthy means of diagnosis of rabies. 2. That when these changes are not present it does not necessarily imply that rabies is not present. The lesions afford contributory evidence more or less valuable, depending on the duration of the clinical manifestations. 3. That in certain cases when the capsular changes are slight, such as in animals dying or killed in the early stages of the disease, the changes are more marked in the disto-peripheral end of the ganglion. 4. That the rabic tubercle of Babes is present sufficiently often to furnish valuable assistance in cases where only the central nervous system is obtainable without any of the ganglia, but in cases where the ganglia can be had they offer a simpler and easier method of diagnosis than do the brain or cord themselves.

81.—See abstract in THE JOURNAL of April 16, p. 982.

88. **Pregnancy and Tuberculosis.**—Bernheim finds that the influence of pregnancy is the more serious as it supervenes at the more advanced stage of the disease. In case of cured or improved tuberculosis the influence of pregnancy is the more serious as the tuberculosis is the less distant and the cure more recent. As regards advice as to marriage for tuberculosis patients, it is exceedingly difficult to establish a rule, as the disease is very capricious in its course and one is in doubt

even after the absence of all bacilli whether the cure is so thoroughly established as not to be annulled by some disease like la grippe or conditions of physical fatigue like pregnancy. It is proper to advise that pregnancy may awaken the old tuberculosis and that it may possibly reopen the whole past illness. In fact he would systematically prohibit maternity in all tuberculous patients, even those recovered.

90. **Nausea and Vomiting During Pregnancy.**—The chief causes of this complication, according to Taylor are: 1. Deficient excretion due to carelessness in regard to the condition of the bowels and kidneys. 2. Mechanical reasons, the pressure on the rectum by malpositions of the uterus, or tumors, with or without adhesions, causing reflex disturbance. 3. Nervous irritability. In all cases careful physical examination should be made to determine the pathologic facts, and the cause, whatever it may be, removed. In cases of nervous irritability the exciting cause should also be looked after and possibly malaria or other toxins. Rest in bed, avoidance of excitement, the use of potassium bromid, valerian fluid extract, dilute hydrocyanic acid or other nerve sedatives are mentioned. The pernicious vomiting of pregnancy described by some textbooks is simply the intensification of ordinary conditions, usually due to prolonged neglect or ignorance. There is danger in the suggested remedies of dilatation of the cervix or emptying the uterus, since there are many women whose statements are unreliable in this regard and whose neglect of treatment is the direct outcome of their desire to have a miscarriage at any price.

97. **Our Daily Bread.**—Homan reviews the methods of bread making and claims that there is no special difference as regards wholesomeness between alum and cream of tartar baking powders, and says that the prejudice against alum dates from the time when it was used to whiten flour. Much of the nutritive value of the flour is dissipated in the common everyday methods of baking bread, and the method of bread-making has not yet reached perfection. Serious dyspeptic difficulties may follow the use of yeast-made bread, as well as baking-powder bread.

98. **Myxoma of Larynx.**—After noticing the previous literature, Gibb reports his case and calls attention to the lack of characteristic symptoms and the need of careful examination. In this case the growth was only visible by the laryngoscope during forced attempts at phonation. He thinks it safer in laryngeal cases to withhold a positive diagnosis until a number of examinations have been made and on different days, and after exhausting all the resources at our command to obtain a quiet larynx.

101. **Laryngeal Tuberculosis.**—Coulter finds guaiacol one of the most reliable therapeutic agents, using a rather stronger solution than that recommended by Donnellan, rarely having trouble with a beginning of 20 per cent. solution and gradually increasing its strength so that at the end of ten days or two weeks we can use an 80 per cent. or full strength solution. Previous to the use of guaiacol he cleanses the mucous surface with a warm alkaline, sterilizing spray, not too vigorously applied and then applies the anesthetic of holocain and antipyrin, 1 per cent. of the former and 1.5 per cent. of the latter before using the guaiacol. He has found no remedy so frequently or generally satisfactory in its results. Where he can use the injection method this is specially valuable, as the speedy relief it gives to the dysphagia is most gratifying to the patient.

103. **Camphoroxol and Menthoxol in Ear Diseases.**—From a suggestion of Prof. Stetter, of Koenigsberg, Hotz was lead to use these oxols in ear troubles, swabbing the attic region in one case with the undiluted drug. While his experience is limited, he thinks he owes considerable to these remedies. Being non-irritating they can be used at the early stage of infectious otitis and may perhaps arrest the disease so as to prevent serious complications. While their main field for usefulness is in the tympanic cavity they may also be quite serviceable in the after-treatment of mastoid operations and in certain affections of the external meatus.

108.—This article was abstracted in THE JOURNAL, XXXV, p. 1424.

109. **Uretero-Vesical Implantation.**—Baldwin reports three cases in which he implanted the ureters into the bladder from which they had been severed after excision of malignant growths, by passing a forceps into the bladder through the urethra and selecting a point on the bladder wall which could be most easily approximated to the proximal end of the ureter. This point was opened, the forceps pushed through, and the end of the ureter caught and drawn into the bladder, to the opening in which it was then carefully united with fine catgut. When tension was too great to render implantation safe, the bladder wall was fastened with adhesion to other tissues to relieve the tension. He thinks that by artificial dislocation of the bladder in this way the range of attachment can be so increased as to take in all or nearly all cases in which injury to the ureters occurs during hysterectomy. It is a much simpler operation than uretero-ureteral anastomosis. In all three of these cases the result was good, without any leakage.

110. **The Streptococcus in Gynecology.**—After reporting cases, Hunner concludes that: "1. The gynecologist should make a probable diagnosis of streptococcus infection from the history alone. 2. The characteristic post-puerperal streptococcus lesion is the dense cellulitic mass usually situated in the subperitoneal tissues, and localized on one side or in one region. Palpation as an aid in diagnosis, is second in importance only to the history. Case 2 demonstrated that there are exceptions to this rule. 3. Having made a diagnosis of probable streptococcus infection, consider well the method of operating. As you have seen from this brief series, many cases can be reached without entering the peritoneal cavity. Where it is absolutely necessary to do celiotomy, use great care in guarding the general cavity, and if contamination of the pelvis occurs, leave a free supply of gauze, not so much for drainage as for the purpose of keeping the intestines away from the infected area, until there is formation of protective granulations."

113. **Pneumonia of Influenza.**—Moorehouse points out the following as the more important differentiations between influenza and other forms of pneumonia. The lobar pneumonia of influenza is most certainly atypical. The onset lacks the distinct rigor, the severe chest pain and dyspnea are not usual, and the general symptoms of influenza are present. The consolidation is less complete, the crepitant râles are less numerous and bronchitis is apt to be a complication. The pulse tends to be rapid, weak and irregular. The temperature is usually lower and shows remissions when they would not occur ordinarily in croupous pneumonia and the termination of fever is usually by lysis, though this is not invariable. In some cases the febrile movement may terminate quite rapidly after a shorter course than is common in true pneumonia, the consolidation persisting for some time after normal temperature. The sputum is rarely rusty, though it may be either blood-streaked or bright-red from the copious capillary hemorrhages. It is apt to resemble bronchitis sputum and especially likely to be purulent. The lobular pneumonia of this type is often more insidious than usual. Sometimes localized consolidation may be found in one place one day and in another the next. This, however, is more characteristic of congestion than consolidation. Not infrequently the consolidation becomes widely spread and closely resembles lobar pneumonia, and certain complications may occur. The serous cavities are specially subject to inflammation; there may be dry or serous pleurisy or purulent effusion and empyema or pericarditis. In the lungs the tuberculous process seems often to start from this, or gangrene or abscess may occur. Some of these complications are doubtless due to mixed infection. The diagnosis would rest ultimately on the demonstration of the Pfeiffer bacillus, but not all the pneumonias occurring during the progress of influenza can be charged to this.

118. **Renal Calculus.**—The principal points in the treatment of renal calculus mentioned by Kerr, are the relief of pain for which he advises heat and the free imbibition of hot drinks before the use of narcotics. Of these last the best is morphin injected into the back over the offending organ. The dose should be reasonably large. He has never had any occasion to use chloroform between the attacks. The alkaline constitu-

tional treatment is the only one which has yielded satisfactory results, but its scope is very limited. His experience has led him to prefer citrate of potassium or lithia or a combination of these. The benefit derived from the use of mineral waters is largely due to the imbibition between meals of large quantities of water, and patients should therefore be advised to drink freely, especially before retiring for the night, as then the urine is more liable to become concentrated and precipitation take place. If the calculus be of the uric acid variety the diet should be regulated according to the condition. If of the oxalate variety suitable measures are also indicated.

119. **Surgical Treatment of Renal Calculus.**—The indications for the surgical treatment of renal calculus as stated by Rixford are: 1. Cases with history of sudden pain in the region of the kidney or with hematuria, with or without vesical irritability, and those which develop uremic symptoms should be operated upon at once. 2. Cases of calculus shown by the *x*-ray to be incurable by medical means, should also be operated upon at once. 3. Cases in which small stone located by the *x*-ray remains unmoved for a long period require operation. 4. Cases where symptoms of stone persist and show no improvement are properly surgical cases. The danger of the morphin habit and of irreparable damage to the kidney should be considered. 5. Cases where the calculus has led to pyonephrosis, pyonephritis, etc., should be operated upon and cases of pyelitis if the diagnosis shows no evidence of subsidence, should not be trifled with, but operation should be done in time.

130. **Lichen Planus.**—Lusk uses bichlorid of mercury in doses of 1/16 to 1/12 t. i. d. or biniodid in dose of 1/6 gr. following up the treatment after the disappearance of the lesion with smaller doses. Mercury in doses of 1/12 gr. of bichlorid, 1/2 gr. of protoiodid, and 1/6 gr. of biniodid, is not merely a tonic, but a decided alterative, and few can stand such doses except syphilitics. Lichen planus, he holds, is a syphilide, acquired or hereditary, and the excellent results from this use of mercury is corroborative of this opinion.

131. **Condylomata Acuminata Linguae.**—Heidingsfeld concludes: "1. Extra-genital condylomata acuminata conform not only in clinical character, but also in histologic structure, to condylomata acuminata of genital location. 2. The chief pathologic change is an akanthosis. 3. Though there is no relative increase of connective tissue, there is an absolute one, and hypertrophy of the papillæ is active, not passive, in character. 4. The so-called epithelial fibrillation is a normal process, consisting of spinous processes accentuated by hypertrophy and over-staining."

136.—See abstract in THE JOURNAL of April 6, p. 981.

138.—This article has appeared elsewhere. See THE JOURNAL of January 26, ¶146, p. 290.

FOREIGN.

British Medical Journal, May 18.

Some Remarks upon Analysis of 5000 Cases of Death from Malignant Disease. E. N. NASON.—The opportunity of analysing more than 5000 cases of death from various forms of cancer was utilized by Nason while preparing the report of the committee appointed by his branch of the British Medical Association to inquire into the subject. In these 5000 cases 1837 were males and 3018 females, and in 145 the sex was not stated. This at first sight seems to show a marked tendency of females to the disease in a proportion of about 62 to 38 per cent. of males. This preponderance, however, is shown on examination to be due to the great frequency of uterine and mammary cancer. In all the female cases it was found that in 40 per cent. it was one of these two organs that was affected, hence this liability is due to the possession of these two organs and not to a greater tendency to malignant disease. In fact if cancer in organs peculiar to sex be excluded, the male is found to be most subject to this affection, in a proportion of about 53 to 47 per cent. Nason accounts for this by assuming that the predisposing causes of cancer are more frequently in operation in the males than in females. Among these he mentions trauma and syphilis. It is interesting to note that while a steady and remarkable increase in cancer mortality has occurred during the last thirty years, it is far more noticeable in males than in females. The last decennial report of the Registrar-General shows that the increase in mortality between the years 1861 and 1870 was as great as 78 per cent. among males and only 42 per cent. among females. It is no doubt true that the statistical increase is not altogether genuine, but is partly due to increased skill in diagnosis. This would especially apply to malignant disease occurring in the region of the stomach, pylorus and other internal organs where it is liable to occur. In the following situations cancer is far more likely to occur in the male than in the female; namely, tongue, bladder, esophagus, jaws, face, neck, limbs, lips and stomach, and a very large proportion of deaths from cancer in the male are due to cancer of the stomach and pylorus. The author gives two interesting diagrams showing the proportionate liability at various ages, from which it appears that while cancer of the uterus and breast reach their maximum frequency about the menopause, or a little later, cancer of the rectum and stomach occur most frequently in the seventh decade, and that there is a more or less abrupt drop after the maximum. This fact teaches us that although up to a certain age with probable decreasing cell vitality, the liability to cancer increases, after that age the reverse is the case, thus making it appear that the diminution of vitality beyond a certain point fails to give the stimulus required by malignant growths. The conclusions of the committee are repeated, and the following may be mentioned as some of the more certain predisposing causes: 1. Prolonged local irritation, due to various causes, setting up local inflammatory changes in the irritated tissue. 2. The immediate or after-effects of direct and sudden injury, whether mechanical, thermal, or chemical. 3. Syphilis and possibly other constitutional diseases which are associated with local tissue changes. 4. The tissue degenerations of advancing years varying with the age. 5. Individual proclivity. 6. The presence of fetal remnants or "cell rests." 7. (According to the committee's report) the residence in the neighborhood of a sodden and sewage-soaked soil. Now all these predisposing causes, except possibly the last, resolve themselves into conditions in which the resisting power of the individual cells have most probably been reduced. At any rate the vitality of the cells or their power of specialization has been interfered with. This decreased vitality affords just the conditions, Nason believes, in which a parasitic organism may have the most chance of success.

The Lancet, May 18.

The Pathology and Diseases of the Thyroid Gland. WALTER EDMUNDS.—In his second lecture Edmunds reviews the symptoms produced by the operation of parathyroidectomy, which in his hands were not so bad as those of total excision in dogs, though other authors, Vassale and Generali, have found them worse. The changes which occur in the thyroids after this operation are the diminution or disappearance of the colloid, which is replaced by watery secretion, with changes in the vesicles and secreting cells identical with those described compensatory hypertrophy; but the thyroid lobes do not become enlarged but apparently diminish. This coincides with the view that the parathyroid glands furnish the secretion and the thyroids store it. The symptoms following the operation were the usual ones following athyroidea, namely, tremor, unstable gait passing into paralyses of the hind limbs, emaciation and weakness. In two of the dogs marked narrowing of the palpebral fissures was noticed. On rabbits, in experiments to test the effect of parathyroidectomy, the eyes became wider for a time, but have since become normal. The conclusion is that the excision of the thyroid glands and the parathyroids produces enophthalmos and narrowing of the palpebral fissures, while parathyroidectomy does the same. These are the results of experiments with the nervous system intact, but experiments of cutting out or excising the laryngeal and vago-sympathetic nerves leads to the inference that the secretion of the thyroids is under the central nervous system, and the results of deprivation of the thyroid secretions by the removal of the glands in whole or in part are probably due to defective in-

nervation to a certain extent. The effect of excess of thyroid, as observed after giving large doses of thyroids are noted, and those produced on the eyes, Edwards concludes, are caused by action through the cervical sympathetics, and they correspond to the effect of their stimulation. He excised a length of the cervical sympathetic on one side in two monkeys and then fed them on large doses of thyroids. In twelve days it was noticed that there was exophthalmos and dilatation of the pupil on the operated side while on the other the reverse condition was noticed.

Flies and the Science of Scavenging. G. V. POORE.—Considering the multiplication of flies which is such that the female fly might readily have 25,000,000 descendants in a hot summer, and the experience in the South African War with typhoid dissemination, Poore calls attention to the necessity of the early removal beyond their reach of all decomposing matter. Instead of having deep trenches for the burial of offal and excretions, which should be removed at once, he would have shallow ones which can be quickly dug and quickly filled. The immediate removal of all organic refuse and its instant covering with earth is in his opinion the solution of the important health questions involved in diseases disseminated through flies and otherwise.

Annales de l'Institut Pasteur (Paris), March,

Anticoagulating Serum. J. BORDET and O. GENGOU.—The fibrin-ferments derived from various animals have a specific, anticoagulating action on the serum of other animals. They neutralize the fibrin-ferment and precipitate the plasm, modifying the fibrinogen and thus preventing coagulation.

To Isolate the Typhoid Bacillus. L. REMY.—Inoculation of a guinea-pig is the best means of determining the typhoid nature of a micro-organism suggesting the typhoid bacillus. The inoculation fails, however, if the microbes have been agglutinated. Remy recommends the direct process for making cultures of the typhoid bacillus and the coli associated: one loop of the mixture in 10 c.c. of sterilized water. One loop of this dilution in 10 c.c. of sterilized water and two loops of the latter dilution in gelatin containing .25 per 1000 of phenic acid, and three loops in gelatin containing 5 per 1000 of phenic acid. The indirect process consists of three passages through acid bouillon, containing .5 per 1000 of H_2SO_4 with 5 per 1000 phenic acid. The tubes should be kept at 25 to 30 C.

Variability of the Typhoid Bacillus. E. SACQUÉPÉE.—The tendency of the typhoid bacillus to become agglutinated varies under different conditions. When long in contact with an immunized or immune subject, it loses the power to become agglutinated, but spontaneously regains this faculty in a plugged tube. The modifications are merely due to its becoming accustomed to its environment, and show that the "Eberthiform" is also a true typhoid bacillus.

Archives Generales de Medecine (Paris), April.

The Urinary Secretion in Syphilis. J. PATOIR.—All the old and new diagnostic measures applied to the study of the urinary function in forty-six syphilitics showed that in 50 per cent. the general nutrition was disturbed during the period of the eruptive manifestations of the disease, and also the functions of the kidneys and liver, except in the very mild cases. In the young, the disturbances are a hyperactivity of nutritional processes and of the eliminating function of the kidney. In the elderly and debilitated, this reaction on the part of the organism does not occur, and existing insufficiency of the kidneys is aggravated. Specific treatment restores the general nutrition to normal and there is also a spontaneous tendency in this direction during the intermissions of the disease.

Gastric Toxins. R. CASSAET.—The assumption that certain pathologic conditions of varying gravity originate in abnormal changes in certain food-materials in the stomach is corroborated by Cassaet's comprehensive researches. These abnormal transformations of the food may be due to a superabundant or too powerful gastric juice, or to disturbance of the motor functions of the stomach. The pathologic conditions are dependent upon these digestive disturbances, cease and recur with them, and are consequently closely connected with them. The reproduction in animals of the entire series of pathologic conditions is a convincing argument in favor of the generation of toxins in the stomach. The symptoms include vasoconstriction, mydriasis, myosis, partial or complete anesthesia, spasms in the extremities, general convulsions, somnolence after eating and coma. It may be possible before long to determine the nature of the toxin from the character of the symptoms observed, and by appropriate measures to nullify its action. It may even be possible to prevent its entering the circulation by modifying the composition of the blood or the osmotivity of the stomach contents. The future may even suggest a means of neutralizing the toxin after it has passed into the circulation, by administering some definite chemical antidote or antitoxin.

Bulletin d'Electrotherapie (Paris), April.

Chemical Electrolysis in Hypertrichosis. E. A. WEIL.—Instead of the tedious intrafollicular electrolysis, Weil applies the electricity all over the surface, first pulling out the hairs and moistening the surface with a solution of nitrate of silver or of chromic acid. Under the influence of the electricity, the cathions, the silver and chromin, pass into the follicles and, combining with the chlorin of the tissues, evidently form an insoluble silver chlorid which prevents further growth of the hairs. Experiments on himself showed that the destruction of the hairs on the spots treated was complete.

Nord Medical (Lille), May 15.

Electric Treatment of Mucomembranous Enterocolitis. E. DOUMER.—The writer of this communication has been very successful with the application of the continuous current in the treatment of mucomembranous enterocolitis. The obstinate constipation was conquered at first, and this was followed by the gradual healing of the anatomic lesions and subsidence of all symptoms. The current was applied commencing with 30 to 40 ma. and increasing to 50, during eight or ten minutes, reversing the current each minute. Even when the current was increased to 150 ma. the patient bore it without the slightest injury or production of an eschar. Until the stools become normal, which occurs in ten or twelve days, he repeats the treatment every day, but after this at longer intervals, and discontinues it the twentieth to the twenty-fifth day. The electrodes are covered with several thicknesses of chamois skin, moistened with water or gelatin, and placed at the lowest point of the iliac fossæ. The results in all his seven cases were completely successful.

Presse Medicale (Paris), May 11.

Extradural Spinal Cocainization. SICARD.—The new method of spinal cocainization proposed by Sicard has proved its usefulness for medical analgesia, but is inefficient as a measure for surgical anesthesia. It is completely harmless and enables the cocain to be introduced without fail into the extra-dural or epidural space. He calls it "the method of extra-dural injections by the sacrococcygeal route."

Revue de Chirurgie (Paris), May.

Remote Results of Forced Instrumental Massage in Treatment of Club-Foot. E. VINCENT.—During the last twenty years Vincent has operated on about 500 club-footed patients by tarsotomy or osteoclasis. The osteoclast he uses for the purpose, illustrated in the cut, is a modification of the Robin osteoclast. All his patients walk well, but none have come to the dissecting table, even from an intercurrent disease, consequently he is not able to offer proof of the anatomic conditions. Radiographs are useless, as the ossification is too incomplete in the young for the parts to cast a shadow. He has never known of any inflammatory lesions after the tarsotomy. It produces a traumatism resembling a sprain. The parts are held immovable by the osteoclast, and the operator manipulates them with his hand or the lever, or both. The portions of the bones in which the ligaments are inserted are sometimes torn out when the ligaments refuse to stretch or break, but this traumatism soon heals and aids

in holding the parts in normal position. An actual fracture occurred in only one case. Investigation of cases operated on ten to twenty years ago shows that the tarsotomy was never followed by osteitis or arthritis of the foot in a single instance, while the benefits of the operation have persisted unaltered for eight to twelve years and more. Except in very mild cases, it is better to wait until the child is 1½ to 2 years old before operating. Post-operative massage is indispensable and the wearing of a well-fitting apparatus for years.

Perihepatic and Pleural Complications of Appendicitis. L. LAPEYRE.—There are two varieties of pleurisy due to appendicitis, the pyohemic, from embolic infarcts, which may be either on the right or left side, and the pleurisy from propagation, which is always on the right side. The latter is usually purulent, but serous pleurisy has been observed as also chronic pleurisy of the base without effusion. Both forms of pleurisy are consecutive to a subphrenic abscess, and the pleurisy is merely the final termination of a suphrahepatic or subhepatic abscess, passing through the diaphragm or transmitted by the lymphatics. The route of propagation is always by way of the peritoneum and the right parieto-colic sinus. The first retrocecal abscess may be at a distance from the appendix, but from this primary focus there is always an uninterrupted continuity of the lesions to the diaphragm. The dry, incessant cough and stitch in the side indicate that the inflammation has reached the diaphragm, and may appear even when the pleura is still intact. The termination is generally fatal, death occurring between the fifteenth and the thirtieth day. The only effective treatment is anticipatory, removing the appendix at once before these complications have time to develop. Cases are on record in which appendicectomy 48 hours after the first indication of appendicitis failed to arrest the ascending inflammation.

Semaine Medicale (Paris), May 15.

Fifteen Grams of Fowler's Solution Ingested Without Intoxication. R. LÉPINE.—A man 40 years of age had suffered for several months from gastric disturbances of an alcoholic origin, when he took by mistake 15 gm. of Fowler's solution in a glass of sweetened water, just as he was retiring, and went to sleep at once. He was awakened two and a half hours later by intense pain in the stomach and thirst. He vomited constantly for several hours, but when seen by the physician, twelve hours later, there were no serious symptoms and the recovery was rapid without active medication. He had ingested 15 cg. of arsenious acid in the solution. Lépine ascribes the absence of intoxication to the constriction of the pylorus from the preceding gastric disturbances and the irritation of the poison. The stomach walls evidently did not absorb the arsenic. The contraction of the pylorus in this case—which has also been noted by Lépine in experiments with animals—shows that the pylorus in intoxications may play the part of a protective sphincter. When summoned to attend a person who has taken poison, if it is impossible to induce vomiting or practice lavage of the stomach, contraction of the pylorus should be promoted. A subcutaneous injection of 5 mg. of apomorphin, for instance, would not induce collapse, and if it did not produce vomiting, would at least cause the pylorus to contract. When this protecting mechanism is working, then the lavage can be done with less urgent haste.

Centralblatt f. d. Grenzgebiete d. Med. und Chir. (Jena), iv, 1 to 9.

Treatment of Diabetic Gangrene. H. WOLF.—In this review of 172 communications on diabetic gangrene, Wolf states that writers agree in waiting for demarcation, on antidiabetic diet, in cases of non-inflammatory gangrene, but with the inflammatory form, expectant treatment is only allowable under close supervision, and is dangerous even in these conditions. Investigation of the arteries, especially of the four arteries of the foot, is of great importance in all cases of gangrene in diabetics. Whenever the pulse is weak or imperceptible in the four arteries of the foot, operations below the malleolus are usually inadequate. If the pulse in the popliteal artery is likewise imperceptible, the operation should be at the point where the pulse is felt again. If during the operation the severed vessels do not bleed enough, the limb should be amputated at a higher point during the same narcosis. Operations on the thigh have no special advantage over those of the leg or knee. Local anesthesia—but not infiltration anesthesia—is preferable to general narcosis. The latter, with the operation, favor the onset of coma. A comatose condition, however, is no indication against operating. Five to ten grams of natrium carbonate beforehand is recommended as a preventive measure. Irritating antiseptics and tightly drawn sutures should be avoided. Lindner lost none of six patients on whom he operated, and Bunge none in four, but the general statistics collected show that 50 out of 110 patients died, and 28 out of 75 that were operated on, a proportion of 37.3 per cent. The possibility of the development of gangrene should always be borne in mind in examining elderly diabetics. In Wolf's 118 collected cases none of the patients were under 40, and almost all were approaching the 60th year. Violent pains in the lower limbs should not be diagnosed gout or rheumatism, as they may be due to the affection of the vessels of the nerves which frequent precedes the development of gangrene. There is often a history of pains, paresthesia, and especially formication in these cases, and careful attention should be devoted to these symptoms. Diabetics should observe great care in cutting the nails or corns, and extreme cleanliness and comfortable footgear are indispensable. Even a slight injury requires immediate surgical treatment. Erb and Bunge recommend in cases of symptoms of alterations in the arteries, hot foot-baths with galvanization of the feet and potassium iodid. Massage of the lower limbs is also extremely beneficial, both in preventing or treating arteriosclerosis in these cases, or even incipient gangrene. The question of prophylaxis deserves more attention than hitherto accorded. All writers agree that operative measures must be preceded by antiseptic bandages and antidiabetic diet. Powders are applied by some to transform the gangrene into a dry lesion, and thus hasten demarcation. The most important factor in treatment is the close supervision of the patient. Bunge warns against allowing the most favorable moment for surgical intervention to slip past. The inflammation is liable to spread suddenly. Tuffier will not operate unless he is able to reduce the amount of sugar in the urine. Godlee distinguishes between the deep, vascular, and the superficial, neurogenic gangrene, stating that the former is rapidly progressive and requires prompt amputation, while the latter form is chronic, and expectant treatment is indicated. Wolf, however, rejects this classification, as it does not include the gangrene in which bacteria are the chief agents.

Pigmentation of the Skin in Case of Affections of the Pancreas. W. MAGER.—Study of the literature on this subject demonstrates that pigmentation of the skin is not the direct result of an affection of the pancreas, but is merely one manifestation of the general hemochromatosis in consequence of the cachexia. Some of the affections of the pancreas, such as pigment-cirrhosis, are of a secondary nature caused by the hemochromatosis, which is the result of the profound alteration in the blood such as is caused by a malignant neoplasm or diabetes. Bronzed diabetes is therefore not a special affection, but is rather merely a severe form of diabetes, accompanied by general hemochromatosis and its consequences.

Hysterical Scoliosis. G. MUSKAT.—Three of the fourteen cases of hysteric scoliosis on record are dubious. The age varied from 8 to 35 years, but the majority of the patients were approaching or just past puberty. A fall or violent emotion was the direct cause in a few instances, on a predisposed soil. The muscles of the concave side are usually contracted, rigid, tense and painful. The spine is not painful nor twisted, and there is no indication of a hump. Treatment should be addressed to the hysteria. A supporting corset is recommended by several, but Dolega relates one case in which it proved injurious. The prognosis is not absolutely favorable. Some cases recover without treatment, others after a few days

of appropriate measures, while some resist all kinds of treatment for months, and one case was dismissed uncured. In general the cure is complete in a few weeks, but recurrences may be observed after a longer or shorter intermission.

Thyroid Treatment. L. HASKOVEC.—Fifty-eight important publications on the treatment of myxedema are reviewed in this communication. Haskovec in conclusion quotes Lanz to the effect that most of the symptoms of intoxication observed during thyroid treatment are caused by toxic substances generated by putrefaction of the gland or its extracts. These symptoms as a whole are called thyroidism, and Buschan distinguishes between a physiologic and pathologic thyroidism. The physiologic symptoms are headache, slight dizziness, pains in limbs, accelerated pulse in persons who eat much meat, increased diuresis and elimination of nitrogen, and loss of flesh. Pathologic thyroidism includes nausea, vertigo, tremor, high temperature, albuminuria, glycosuria, fainting, collapse, angina pectoris, epileptic and uremic attacks, and even possibly, sudden death. Haskovec does not accept this classification of symptoms, observing that the reaction to the treatment differs in different individuals, and as the essential element of the thyroid gland is still unknown, we are unable to dose or foretell its effect in every case. Persons with defective thyroid development are most susceptible. Further research and reports of experiences are urgently needed in this line of physiologic and pathologic thyroidism.

Movable Liver. L. TELEKY.—Only 70 or 80 cases are on record in which the liver was actually movable, that is, detached from the diaphragm. Of these patients, 90 per cent. were women. The abdomen was pendulous in 16 out of 21 cases, and only 4 were nulliparæ. The removal of a tumor favors the detachment of the liver, and there are usually predisposing congenital conditions, such as the slackness or absence of the suspensory or coronary ligaments. Lesions that render the liver heavier also favor its dislocation, but some unusual exertion or trauma is usually the direct cause. Twenty-three operations on account of movable liver have been reported. It is remarkable that cardiac affections are so rarely complicated with movable liver, as they affect the suspending apparatus injuriously in several ways, by diminishing the aspirating capacity of the thorax, by relaxing and enlarging the vena cava, by the development of ascites and by the increased absolute and specific gravity of the congested liver. This immunity is possibly due to the fact that persons with severe cardiac affections are usually confined to their bed, and are consequently not exposed to the conditions that produce dislocation of the liver in the predisposed. Among the 185 communications quoted, a number of writers consider the corset a protection against dislocation of the liver rather than a factor in its production, but tight skirt bands are considered injurious in this respect. Tight lacing may twist the liver on its axis forward or backward and the subjective disturbances may be severe, but it can not cause downward dislocation of the liver. Einhorn classifies cases of movable liver as, 1, without symptoms; 2, with symptoms of dyspepsia; 3, hepatalgia; 4, colic pains in the liver, and 5, symptoms of asthma. Other symptoms may indicate occlusion of the biliary passages or interference with the ureter or bladder, but disturbances of the circulation are slight and rare. Hematemesis was noted in one case, a liver-cough in another, ceasing as the patient reclined, fever in a few others and pains extending to the neck. The diagnosis was correct in only four of Boetticher's 23 collected cases operated on. The epigastrium was sunken in a few. The patient should be examined standing. The relaxed ligaments and abdominal wall should be strengthened by tonic measures, supplemented by orthopedic appliances in pronounced cases, but if these fail, the organ must be restored to its proper position and fastened in place. Almost all the patients treated by hepatopexy have been relieved of their disturbances and restored to their former working capacity. The freshening of the surface of the liver is the most important factor in operating, as wounds of the liver display a marked tendency to the formation of solid, fibrinous adhesions. Protracted after-treatment is also important, the patient on his back, the pelvis elevated. Among the various methods of hepatopexy described, Depage combined laparectomy with the shortening and fastening of the ligamentum teres. He excised a large portion of the pendulous abdominal wall and of the linea alba to the margin of the rectus muscles, and sutured the ligamentum teres in the upper corner of the wound. This restored the liver to its normal position, in which it was supported by the shortened abdominal wall.

Spinal Cocainization. F. HAHN.—In this review of the 1708 published cases of anesthesia by means of spinal cocainization, it is stated that in 110 the analgesia was a failure. Severe, threatening symptoms were observed in 25 per cent of all cases, and 8 deaths have been reported consecutive to spinal cocainization. Forty-one authors in the United States have reported 586 operations under this method of analgesia, while only one has been reported in England. This was a strumectomy—the only operation above the thorax that has yet been recorded.

Centralblatt f. Chirurgie (Leipsic), May.

Arrested Ether Narcosis. KRONACHER.—It is unnecessary to use as much ether as generally employed in minor and medium operations. Kronacher for three years has been individualizing the amount to each case and found a very small amount sufficient to abolish pain, although deep narcosis was not obtained. In extracting twenty teeth from one patient, for instance, she screamed as each tooth was drawn, but afterwards stated that she felt no pain. This minimum narcosis is not followed by any after-effects and the patients retain their consciousness, but later have no remembrance of what occurred during the narcosis. His technique is as follows: 5 to 10 c.c. ether are poured on an ordinary mask, allowing considerable access of air, then 10 to 20 c.c. until agitation is noticed, then a few more inhalations, when the mask can be removed and the operation commenced. Possibly further inhalation of 10 to 20 c.c. may be found necessary. The anesthesia thus obtained lasts ten minutes. Even in major operations the ether employed can be restricted to the bare amount sufficient to abolish pain.

Apparatus for Infiltration Anesthesia. L. MOSZKOWICZ.—By means of the simple apparatus described, the syringe is dispensed with and the fluid is automatically injected. A jar is filled half full of the anesthetic fluid. Two tubes with faucets pass through the stopper into the jar, and a rubber tube is attached to each. The right-hand rubber tube terminates in a needle tip for the injection, and a piston syringe is attached to the left-hand tube. A few strokes of the piston compress the air in the jar; the faucet is turned to prevent the escape of the air and the syringe is removed. Opening the faucet in the right tube sends the fluid in a jet under the influence of the compressed air. This tube and tip can be removed and boiled with the other instruments. The jar can be kept warm by standing it in a basin of warm sublimate solution and the needle tip can be placed with the instruments on the table. Gersuny has been using this apparatus extensively and is much pleased with it.

Deutsche Med. Wochenschrift (Leipsic), May 9.

Successful Serum Diagnosis of Tuberculosis. E. ROMBERG.—Von Behring makes an emulsion of tubercle bacilli which is conveniently handled and has proved successful in the serum diagnosis of tuberculosis. Romberg announces that this emulsion is agglutinated by the serum of tuberculous subjects the same as Arloing and Courmont have succeeded in agglutinating homogeneous cultures of living bacilli. He also states that blood taken from the placental portion of the umbilical cord of newly-born infants, who in all probability were free from tuberculous taint or infection, failed to produce agglutination. On the other hand, he found that the serum of 56.4 per cent. of persons who showed no clinical evidence of tuberculosis possessed the agglutinating property. All the patients with clinically evident tuberculosis, agglutinated except a few in the most advanced stages, and those in whom the lesions had apparently healed. These facts indicate that the serum reaction is no assistance for the early diagnosis of an already manifest tubercular infection—it is

positive in persons with no clinical symptoms of tuberculosis and fails in a certain number of clinically certain cases. The proportion of the former, however, corroborates Naegeli's assertion in regard to the frequency of tubercular lesions in persons over 18. The positive result of the test is considered by Romberg certain evidence of the existence of a progressive or at least not yet inactive tubercular process. He also believes that the negative result testifies either to actual freedom from tuberculosis or to the healing up of an existing tubercular process or to a very advanced stage of the disease. He considers this serum diagnosis a most valuable means of detecting still latent tubercular processes. His material is too small—only 95 cases—for him to proclaim his convictions with certainty.

Work of Cancer Investigating Committee. The committee has held four meetings since its organization in February at Berlin. In the various addresses and reports we note that von Leyden is in favor of the parasitic theory of malignant neoplasms, and thinks that a parasitic origin offers a much better outlook for successful prophylaxis. The statistics presented show that "cancer" has increased by 50 per cent. in Prussia since 1888. There are 10,000 patients with "cancer" among the 500,000 inmates of the various hospitals and sanatoriums throughout the country. The records of the life and sickness insurance companies are a valuable mine of information for such investigations. They seem to reveal a decrease in the number of cancers among the poorer classes and an increase among the well-to-do. Pfeiffer urged that every case of carcinoma reported should be accompanied by the pathologico-anatomic proof, and this could easily be accomplished if the pathologic institutes would investigate the material sent in by members of the committee and others interested, and if some uniform definition of the term carcinoma could be decided upon. The experience of the Gotha Life Insurance Bank has been that the residences of the Roman clergy in south Germany are frequently actual "cancer houses." Behla stated that cancer is endemic in Luckau, but confined to certain localities and houses. Examining these houses, he found that each one was damp and mouldy, especially in the cellars. He also noticed that persons most frequently affected were those whose business took them into cellars, dealers in fruits, wine merchants, farmers, etc., or else brought them in contact with wood, such as carpenters, cabinet makers, masons, woodsmen etc. Villages that have many cases of cancer have always a damp subsoil while others on a dry foundation seem to be almost immune to cancer. The fungus growth, merulius lacrymans, or "Hauschwamm," is constantly spreading in the houses of central Europe. It is estimated that every tenth recently constructed building in Berlin is invaded by the merulius. Whether it is pathogenic for man or not is not yet decided, but in animals it induces a proliferation of epithelium and connective tissue. It develops with yeast-like features, and its spores may alight on food, vessels, water, etc. He urges that the connection between the presence of this mould and the prevalence of cancer be borne in mind in collecting statistics in future. A subcommittee was appointed to collect and report all cases of malignant neoplasms published in the medical literature. The government has awarded 3000 marks for the expenses of the committee and the congress of internal medicine and a sickness insurance society have each given 500 marks.

May 16.

Occult Gastric Hemorrhages. I. BOAS.—By the term "occult hemorrhage" Boas means an oozing of blood too insignificant to be detected by the naked eye in the stomach contents and yet by its persistence, a serious menace to the health. Repeated investigation of the stomach contents of 83 individuals showed that these occult hemorrhages never occurred in the course of gastric neuroses, acid or subacid gastritis, hyperacidity, hypersecretion or moderate ectasia. Traces of blood were found occasionally in cases of gastric ulcer, and consecutive stenosis of the pylorus, also in a patient with stenosis of the duodenum, in syphilis of the stomach and in a case of probably carcinomatous stenosis of the large intestine. On the other hand, the blood was found constantly in a third group of cases which included all of carcinoma of the stomach—a total of twenty. Independently of the chemical composition of the stomach contents or of the motor functions of the organ, blood was found invariably in the stomach contents in these cases, although the closest examination failed to reveal the presence of blood by ordinary tests. Blood was also found in the stools at the same time, but was not macroscopically apparent. The traces of blood were rendered evident by Weber's guaiacum test, described in the *Berlin Klinische Wochenschrift*, 1893, No. 19. It is more reliable and sensitive than any other chemical, spectroscopic or microchemical reaction. This "occult hemorrhage" is not a very important diagnostic point in itself, but combined with others, it affords a valuable corroboration of other diagnostic measures for the determination of carcinoma or ulcer of the stomach, differentiating them from a gastric neurosis. Traces of blood in the feces are equally significant. Boas has noted macroscopically evident hemorrhage in 36 per cent. of 100 cases of certain carcinoma of the stomach. The discovery of these occult hemorrhages suggests that perhaps they are the most important cause of the marasmus accompanying carcinoma. Such patients are bleeding to death by droplets, and it may be possible by appropriate medication to arrest this tendency and thus prevent this waste of the vital fluid.

[Simon describes the guaiacum test for blood in urine as a mixture of equal parts of tincture of guaiacum and oil of turpentine, which has been ozonized by exposure to the air. It is allowed to flow carefully along the side of a test tube upon the urine to be examined, in such a manner as to form a distinct layer above the urine. In the presence of blood pigment a white ring, which gradually turns to blue, will be seen to form at the surface of contact.—ED.]

Therapie der Gegenwart (Berlin), May.

Treatment of Hammer Toe. F. KAREWSKI.—This annoying condition can be cured without danger of recurrence, by exposing the contracted flexor tendon through a longitudinal plantar incision, and opening the joint, severing the tendon. The phalanges are then made to protrude from the wound by hyperextension, and the articulating surfaces are trimmed with bone-cutting forceps until they are in easy contact with each other without tension of the soft parts. There is no recurrence of the deformity with this technique, which Karewski has been following for ten years.

Therapeutische Monatshefte (Berlin), May.

Influence of Certain Substances on the Gastric Secretions. A. HERZEN.—The writer's experiments demonstrate that ordinary dextrin and Liebig's extract of beef have a powerful action in stimulating the secretion of gastric juice and in the production of pepsin, if administered in the amount of 25 to 50 gm. at a time. The dextrin increases the production of pepsin while the beef extract affects pre-eminently the secretion of gastric juice. Alcohol has also a powerful effect in promoting the secretion of the gastric glands, but has no peptogenic power. Even introduced by the rectum, this elective influence on the gastric glands is strikingly apparent. Chemically pure, white dextrin does not affect the gastric secretions, but the allied carbohydrates, inulin and liver-glycogen, seem to possess marked peptogenic power, but even with as much as 25 to 59 gm. there is no stimulation of the gastric secretion. If after their ingestion, however, 5 c.c. of alcohol are administered by the mouth or rectum, a gastric juice extremely rich in pepsin is secreted in abundance. The physician by these means is enabled to control the gastric secretions at will. The detailed report of the experiments and tests was published in a recent issue of *Pflueger's Archiv.*

Treatment of Puerperal Fever. AUFRECHT.—The success obtained by Aufrecht in the treatment of croupous pneumonia with the subcutaneous injection of quinin, and the fact observed that pneumonia occurring in the lying-in period is frequently accompanied or followed by puerperal fever, suggested that the injections of quinin might prove as effective in the latter affection as in the former. Three years of experience have confirmed the truth of these premises and demonstrated the great value of this method of treating puerperal fever, which Aufrecht now urgently recommends to the profession. All cases

of puerperal endometritis in his service are treated by intrauterine injection of a 2.5 per cent. solution of carbolic acid, whenever the temperature reaches 39 C., repeated two or three times in the twenty-four hours. The fluid must be warm and the injecting catheter be provided with a deep groove on the outside for the escape of the fluid, which is caught and measured as it emerges from the vagina. The quinin is injected in the proportion of .5 gm. quinin hydrochlorate in 17 gm. of warm water in the side of the abdomen, into the subcutaneous connective tissue, the needle held perpendicularly as the patient reclines.

Necessity of Isotonic Solutions for Local Anesthesia.—The disturbances noted after the injection of cocain or eucain, are due to the fact that the fluids are not isotonic with the blood serum. They can be entirely obviated if the solution is rendered isotonic by adding salt. Braun and Heinze in recent works have recommended the formula: Eucain B .1; sodium chlorid .8 and distilled water 100, at body temperature.

Zeitschrift f. Orthopaedische Chirurgie (Stuttgart), ix, 1,

Treatment of Severe Scoliosis. C. DEUTSCHLAENDER.—Scoliosis is not merely a lateral curvature of the spine but is frequently also a horizontal, frontal or sagittal torsion. Since this fact has been understood the results of treatment have been better. Correction of the deformity can be accomplished in most cases unless there are irreparable lesions. The indifference and scepticism of many physicians in regard to the curability of severe scoliosis have driven many patients to charlatans. A trained eye and clear understanding of the pathologic conditions are necessary to individualize treatment to the case. The prognosis is of course better during the periods of rapid growth, but even in adults the results justify treatment, although one and a half to two years may be required or even more. The spinous processes are no indication of the extent of the distortion. Specimens are illustrated showing that the processes may be almost on a straight line, while the rest of the spine is extremely distorted. The shape and position of the ribs are dependent on the spine and, therefore, the condition of the latter can best be estimated by the arcs of the ribs and their oblique diameters. The contracted and rigid muscles are first restored to normal by gymnastic exercises and the spine mobilized. In the mobilizing exercises efforts must be directed to transform the irregular, slanting ellipsoid formed by the deformed arcs of the ribs, with its unequal diameters, into a regular oval as in normal conditions, with both diameters equal. The Schulthess pendulum apparatus is the most effective for this functional correction, but good results are obtained with less expensive appliances, especially the sloping plane and the Hoffa-Barwell sitting frame. The plaster cast is applied in the latter, an assistant pressing the thorax into the correct shape. The cast holds the entire spine in extension, fitting close under the lower jaw and ears, but allowing considerable motion of the arms. It should not be taken off for eight to twelve weeks and then only with extreme care, the patient reclining at first all day, not even bathing. The fifth day the patient can get up for an hour and after a week he need not stay in bed, but gradually return to the mobilizing and strengthening exercises. The physician should see the patient two or three times a year thereafter and the latter should take a month's course of gymnastics and massage every year if possible.

Books Received

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

CLINICAL PATHOLOGY OF THE BLOOD. A Treatise on the General Principles and Special Applications of Hematology. By James Ewing, A.M., M.D., Professor of Pathology in Cornell University Medical College, New York City. Illustrated with 30 Engravings, and 14 Colored Plates drawn by the Author. Cloth. Pp. 432. Price, $3.50. Philadelphia and New York: Lea Brothers & Co. 1901.

INDUCTION COILS. How to make, use and repair them, including Ruhmkorff, Tesla, and Medical Coils, Roentgen Radiography, Wireless elegraphy, and Practical Information on Primary and Secondary Battery. By H. S. Norrie, Second Edition, Revised and Much Enlarged. Cloth. Pp. 269. Price, $1.00. New York: Spon and Chamberlain. 1901.

OIL SURGERY. A Text-Book on General Medicine and Surgery as Applied to Dentistry. By Stewart Le Roy McCurdy, A.M., M.D., Professor of Anatomy and Surgery, Pittsburg Dental College. Cloth. Pp. 368. Price, $3.00 net. Pittsburg, Pa.: The Calumet Publishing Co. 1891.

TRANSACTIONS OF THE AMERICAN PEDIATRIC SOCIETY. Twelfth Session, Held at Washington, D. C., May 1, 2 and 3, 1900. Edited by Walter Lester Carr, M.D., Volume XII. Cloth. Pp. 249. Reprinted from *Archives of Pediatrics*. 1900.

PROCEEDINGS OF THE CONNECTICUT MEDICAL SOCIETY, 1900. One Hundred and Eighth Annual Convention, held at New Haven, May 23 and 24. Cloth. Pp. 394. Published by the Society. 1900.

NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS. Transactions of the Tenth Annual Meeting, held at Atlantic City, N. J., June 4, 1900. Paper. Pp. 71. Easton, Pa.: Chemical Publishing Co. 1901.

HEALTH AND HYGIENE FOR THE HOUSEHOLD. By John Joseph Nutt B.L., M.D., Member of the American Medical Association. Cloth. Pp. 69. Price, $0.50. New York: The Abbey Press.

MUNICIPAL SANITATION IN THE UNITED STATES. By Charles V. Chapin, M.D., Superintendent of Health of the City of Providence. Cloth. Pp. 970. Price, $5.00. Providence, R. I.: Snow and Farnam. 1901.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., May 16 to 22, 1901, inclusive:

Aristides Agramonte, contract surgeon, is relieved from further duty on the board investigating infectious diseases prevalent in the Island of Cuba, and will report to the commanding general of the Department of Cuba for assignment.

Dallas Bache, colonel and asst. surgeon-general, U. S. A., sick leave of absence extended; relieved from further duty in the office of the Surgeon-General of the Army.

Charles N. Barney, contract surgeon, member of board at Fort Monroe, Va., to determine the fitness of officers of the Army for promotion.

Louis Brechemin, major and surgeon, U. S. A., relieved from duty on examining board at Denver, Colo.

George E. Bushnell, major and surgeon, U. S. A., member of an examining board at Denver, Colo., vice Major Louis Brechemin, surgeon, U. S. A., relieved.

Lee B. Clayton, lieutenant and asst.-surgeon, U. S. A., member of board at Fort Myer, Va., to examine officers of the Army for promotion.

Christopher C. Collins, lieutenant and asst.-surgeon, U. S. A., member of a board at San Francisco, Cal., to examine officers of the Army for promotion.

Joseph J. Curry, captain and asst.-surgeon, Vols., from the Army and Navy General Hospital, Hot Springs, Ark., to Manila, P. I., via San Francisco, Cal., for duty as a member of the board to investigate tropical diseases.

William B. Davis, major and surgeon, U. S. A., member of a board at Fort Meyer, Va., to examine officers of the Army for promotion.

William H. Forwood, colonel, asst. surgeon-general, U. S. A., on being relieved from duty as chief surgeon, Department of California, to report in person to the Surgeon-General for duty in his office.

Charles M. Gandy, captain and asst.-surgeon, U. S. A., former orders amended so as to direct him to proceed from Fort Slocum, N. Y., on the transport *Ingalls*, via the Suez canal, to Manila, P. I., for duty in the Division of the Philippines.

Luther B. Grandy, major and surgeon, Vols., leave of absence extended.

Frederick N. C. Jerrauld, contract surgeon, from Buffalo, N. Y., via Seattle, Wash., to Fort St. Michael, Alaska, for duty in the Department of Alaska.

Henry S. Kilbourne, major and surgeon, U. S. A., member of a board in San Francisco, Cal., to examine officers of the Army for promotion.

John A. Metzger, major and surgeon, Vols., leave of absence extended.

John M. O'Reilly, lieut.-col. and deputy surgeon-general, U. S. A., member of a board at Fort Monroe, Va., to determine fitness of officers of the Army for promotion.

George P. Peed, captain and asst.-surgeon, Vols., leave of absence extended.

Ira A. Shimer, lieutenant and asst.-surgeon, U. S. A., leave of absence granted.

Edward D. Sinks, captain and asst.-surgeon, Vols., recently appointed, and now at Batavia, Ohio, to proceed to Manila, P. I., via San Francisco, Cal., for assignment in the Division of the Philippines.

Richard P. Strong, lieutenant and asst.-surgeon, U. S. A., from the Division of the Philippines to duty at the Army and Navy General Hospital, Hot Springs, Ark.

Eugene L. Swift, captain and asst.-surgeon, U. S. A., to report in person to the president of the examining board in Washington, D. C., for examination for promotion.

Frederick A. Washburn, Jr., major and surgeon, Vols., recently appointed, and now on leave, to proceed to Manila, P. I., via San Francisco, Cal., for duty in the Division of the Philippines.

Jean C. Whitney, contract dental surgeon, from Washington, D. C., to Manila, P. I., via San Francisco, Cal., for duty in the Division of the Philippines.

Allie W. Williams, lieutenant and asst.-surgeon, U. S. A., from Fort Columbus, N. Y., to duty at Fort Logan, Colo.

Francis A. Winter, captain and asst.-surgeon, U. S. A., from San Francisco, Cal., to Fort Sheridan, Ill., for post duty.

Appointments, promotions and other changes in the regular and volunteer medical forces of the Army, reported from the Adjutant-General's Office, April 15 to May 15, 1901:

During the month ending May 15, 1901, the following promoons and other changes in the status of medical officers of the regular and volunteer forces were reported from the office of the Adjutant-General of the Army. Previous changes of this character were published in THE JOURNAL of May 11, 1901:

Appointments, Regular Army.—None.

Promotions, Regular Army.—Lieutenant-Colonels Henry Lippincott and Calvin DeWitt, deputy surgeons general, to be colonels and assistant surgeons general, the former to date from April 13 the latter from May 7, 1901; Majors Charles K. Winne and Timothy E. Wilcox, surgeons, to be lieutenant-colonels and deputy surgeons general, the former to date from April 13, the latter from May 7, 1901; Captain Charles E. Woodruff, asst.-surgeon, to be surgeon, with the rank of major, to date from April 13, 1901.

Retirements, Regular Army.—Colonel Charles C. Byrne, assistant surgeon-general, May 7, 1901, he having attained the age of 64 years.

Appointments, Volunteers.—To be surgeons with the rank of major: Ernest K. Johnstone, of California, April 11, 1901; Captain Charles Lynch, asst.-surgeon, U. S. A., April 22, 1901; Samuel C. de Krafft, of Maryland, April 26, 1901; Captain Isaac W. Brewer, asst.-surgeon, U. S. Vols., May 7, 1901; Captain George P. Peed, asst.-surgeon, U. S. Vols., May 7, 1901; William L. Whittinton, of Missouri, May 7, 1901; William D. Bell, of New York, May 7, 1901, and Lawrence C. Carr, of Ohio, May 7, 1901. To be assistant-surgeons, with the rank of captain: Edward D. Sinks, of Ohio, and Abraham D. Williams, of Florida, May 7, 1901; Luther P. Howell, of Ohio, and Leonard K. Graves, of New York, April 15, 1901; A. A. Surgeon Joseph C. Garlington, March 13, 1901; Roger P. Ames, of Louisiana, April 18, 1901; Howard A. Grube, of Michigan, April 16, 1901; Samuel T. Weirick, of Missouri, April 20, 1901; Michael E. Hughes, of Massachusetts, April 27, 1901; Percy L. Jones, of Tennessee, April 22, 1901; Fred. W. Palmer, of Michigan, and H. Brookman Wilkinson, of Alabama, May 4, 1901. Hospital Steward, to be assistant surgeon with the rank of first lieutenant, 34th Regiment of Infantry: Eliphlet C. Baldwin, April 13, 1901.

Promotions, Volunteers.—Captain Abram L. Haines, asst.-surgeon 31sts Infantry, to be surgeon with the rank of major, April 5, 1901; Captain Harold L. Coffin, asst.-surgeon 39th Infantry, to be surgeon with the rank of major, March 22, 1901; Captain William D. Bell, asst.-surgeon, 42d Infantry, to be surgeon with the rank of major, February 2, 1901; Captain Charles L. Furbush, asst.-surgeon, 44th Infantry, to be surgeon with the rank of major, April 2, 1901; First Lieutenant Richard S. Griswold, asst.-surgeon, 26th Infantry, to be asst.-surgeon, with the rank of captain, April 24, 1901; First Lieutenant Joseph L. Sanford, asst.-surgeon, 2th Infantry, to be asst.-surgeon, with the rank of captain, March 31, 1901; First Lieutenant Charles M. Galbraith, asst.-surgeon, 4th Infantry, to be asst.-surgeon, with the rank of captain, March 13, 1901, and First Lieutenant William W. Purnell, asst.-surgeon, 4th Infantry, to be asst.-surgeon, with the rank of captain, April 13, 1901.

Hororably Discharged, Volunteers.—Major George H. Penrose, surgeon, April 19, 1901.

Commissions Vacated by New Appointments, Volunteers.—By promotion to major and surgeon, U. S. A., Major Walter D. McCaw, surgeon, 42d Infantry, February 2, 1901. By appointment as major and surgeon, U. S. Volunteers: Major Franklin A. Meacham, surgeon, March 22, 1901: Major William F. Lippitt, Jr., surgeon, 4th Infantry, April 2, 1901; Major Charles M. Drake, surgeon, March 23, 1901; Major Henry F. Hoyt, surgeon, March 24, 1901; Major Samuel T. Armstrong, surgeon, March 22, 1901; Major William F. de Needeman, surgeon, March 22, 1901; Major Ira C. Brown, surgeon, March 27, 1901; Major Frederick J. Combe, surgeon, April 17, 1901; and Captain Frederick A. Washburn, Jr., asst.-surgeon, 26th Infantry, April 24, 1901. By promotion to captain and asst.-surgeon, U. S. Volunteers: Captain Howard A. Grube, asst.-surgeon, 48th Infantry, April 23, 1901; First Lieutenant Thomas T. Jackson, asst.-surgeon, 44th Infantry, April 13, 1901; and First Lieutenant Laurel B. Sandall, asst.-surgeon, 43d Infantry, March 25, 1901.

Mustered Out of Service, Volunteers.—Captain Albert H. Ehr, asst.-surgeon, 30th Infantry, April 3, 1901, and Major James E. Shellenberger, surgeon; Captain H. Brookman Wilkinson, asst.-surgeon, and First Lieutenant Eliphlet C. Baldwin, asst.-surgeon, all of the 34th Infantry, April 17, 1901.

Appointments Declined, Volunteers.—By Major Herbert W. Cadwell, surgeon, U. S. Volunteers, the appointment of major, surgeon, March 22, 1901; Major Charles F. Mason, surgeon, 26th Infanty, the appointment of major, surgeon, April 24, 1901; Capt. Charles L. Furbush, asst.-surgeon, 44th Infantry, the appointment to major, surgeon, March 31, 1901; First Lieutenant Loren B. T. Johnson, assistant surgeon, 36th Infantry, the appointment of captain, asst.-surgeon, April 10, 1901; A. A. Surgeon Thomas C. Stunkard, U. S. A., the appointment of captain, asst.-surgeon, April 11, 1901; A. A. Surgeon Harry S. Moore, U. S. A., the appointment of captain, asst.-surgeon, March 20, 1901; A. A. Surgeon Verdo B. Gregory, U. S. A., the appointment of captain, asst.-surgeon, April 5, 1901; A. A. Surgeon Thomas W. Bath, U. S. A., the appointment of captain, asst.-surgeon, March 28, 1901; A. A. Surgeon Joseph C. Garlington, the appointment of captain, asst.-surgeon, March 1, 1901; A. A. Surgeon James B. Pascoe, U. S. A., the appointment of captain, asst.-surgeon, March 25, 1901; Nelson Miles Black, of Wisconsin, the appointment of captain, asst.-surgeon, April 29, 1901.

Navy Changes.

Changes in the Medical Corps of the Navy for week ended May 25:

P. A. Surgeon R. M. Kennedy, ordered home from the *Bennington*, via public conveyance.

Asst.-Surgeon M. V. Stone, detached from the *Buffalo*, and ordered home to wait orders.

Asst.-Surgeon C. H. DeLancy, detached from the *Bancroft*, when put out of commission, and ordered to the *Buffalo*.

Asst.-Surgeon F. M. Furlong, ordered home via public conveyance.

Asst.-Surgeon D. B. Kerr, ordered home, via public conveyance.

Asst.-Surgeon E. J. Grow, ordered home via public conveyance.

Asst.-Surgeon D. G. Beebe, ordered home via public conveyance.

Asst.-Surgeon C. D. Langhorne, ordered home, via public conveyance.

Asst.-Surgeon J. Stepp detached from the *Castine* and ordered to the *Isla de Luzon*.

Asst.-Surgeon E. J. Grow, detached from the *Isla de Luzon* and ordered to the *Castine*.

Asst.-Surgeon E. Thompson, detached from the *Solace* and ordered to the *Petrel*.

Asst.-Surgeon R. W. Plummer, detached from the *Petrel* and ordered to the *Nashville*.

Asst.-Surgeon F. M. Furlong, order detaching from *Brutus* and ordered to Guam, L. I.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended May 23, 1901:

Surgeon C. T. Peckham, granted leave of absence for thirty days from April 19, on account of sickness. Granted thirty days' extension of leave of absence, on account of sickness from May 20.

Surgeon A. H. Glennan, to rejoin station at Habana.

P. A. Surgeon C. P. Wertenbaker, to proceed to Meridian, Miss., for special temporary duty.

P. A. Surgeon J. B. Greene, granted five days' extension of leave of absence.

Asst.-Surgeon C. E. Decker, granted leave of absence for ten days from May 11, on account of sickness.

Asst.-Surgeon Taliaferro Clark, granted leave of absence for thirty days from May 22.

Asst.-Surgeon G. M. Corput, to proceed to South Atlantic quarantine. Granted leave of absence for one month.

A. A. Surgeon J. C. Rodman, granted leave of absence for four days.

A. A. Surgeon A. W. Slaughter, granted leave of absence for four days from June 4.

BOARD CONVENED.

Board convened to meet at Washington, D. C., May 20, 1901, for the purpose of making physical examination of applicants for cadetship in the Revenue-Cutter Service. Detail for the board: Surgeon L. L. Williams, chairman; Asst.-Surgeon B. S. Warren, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended May 24, 1901:

SMALLPOX—UNITED STATES AND INSULAR.

Alaska: May 11, Hoonah, 15 deaths; Killisnoo, 4 cases.
California: Los Angeles, April 27-May 11, 12 cases; San Francisco, May 4-11, 6 cases.
Illinois: Chicago, May 11-18, 6 cases.
Indian Territory: Coalgate, May 11, 65 cases.
Kansas: Wichita, May 4-18, 37 cases.
Kentucky: Lexington, May 11-18, 4 cases.
Louisiana: Baton Rouge, May 5-12, 2 cases, 1 death; New Orleans, May 11-18, 9 cases, 2 deaths.
Massachusetts: Boston, May 11-18, 10 cases; New Bedford, May 16-18, 5 cases.
Michigan: Detroit, May 11-18, 58 cases.
Minnesota: Minneapolis, May 4-11, 23 cases.
Nebraska: Nebraska City, March 30-April 6, 2 cases; April 20-27, 3 cases; South Omaha, April 23-May 21, 36 cases.
New Hampshire: Manchester, May 11-18, 4 cases.
New Jersey: Jersey City, May 5-19, 15 cases; Newark, May 11-18, 4 cases, 1 death.
New York: New York, May 11-18, 105 cases, 13 deaths.
Ohio: Cincinnati, May 10-17, 9 cases, 1 death; Cleveland, May 11-18, 54 cases; Youngstown, May 4-18, 2 cases.
Pennsylvania: May 11-18, Lebanon, 4 cases; Philadelphia, 9 cases, 1 death; Pittsburg, 2 cases; Steelton, 2 cases; Williamsport, 1 case.
Tennessee: May 11-18, Memphis, 12 cases; Nashville, 3 cases.
Utah: Salt Lake City, May 4-11, 7 cases.
Washington: Tacoma, May 1, 1 case from Vashon Island.
West Virginia: Wheeling, May 11-18, 8 cases.
Wisconsin: Fond du Lac, May 11-18, 1 case.
Hawaii: Kauai, Lihue, April 23, 1 case; Waimea, May 6, 1 case.
Porto Rico: Ponce, May 6-13, 3 cases; San Juan, May 4, 2 cases.

SMALLPOX—FOREIGN.

Austria: Prague, April 20-27, 4 cases.
Belgium: Antwerp, April 20-27, 5 cases.
France: Rheims, April 8-15, 2 cases.
India: Bombay, April 16-23, 6 deaths; Calcutta, April 13-20, 39 deaths; Karachi, April 14-21, 4 cases, 3 deaths; Madras, April 13-19, 11 deaths.
Malta: April 14-20, 1 case.
Russia: Moscow, April 14-21, 6 cases, 2 deaths.
Odessa, April 20-27, 5 cases, 3 deaths; Warsaw, April 13-20, 6 deaths.
Spain: Malaga, April 16-20, 1 death.

YELLOW FEVER.

Cuba: Havana, May 6-11, 2 cases.

CHOLERA.

India: Bombay, April 16-23, 4 deaths; Calcutta, April 13-20, 9 deaths; Madras, April 13-19, 1 death.

PLAGUE.

Africa: Cape Town, to April 14, 291 cases, 118 deaths.
China: Hongkong, March 23-April 6, 31 cases, 28 deaths.
India: Bombay, April 16-23, 459 deaths; Calcutta, April 13-20, 389 deaths; Karachi, April 14-21, 270 cases, 238 deaths.
Japan: Nagasaki, April 17, 1 death.